



OSDMA LOGO

District Disaster Management Plan (DDMP)

District – Angul

Year -2019 ~2020



Submitted to : Odisha State Disaster Management Authority, Bhubaneswar

Submitted by : District Disaster Mangement Authority, DDMA
Collectorate, Angul,
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Acknowledgement

Preface

The District Disaster Management Plan, Angul for the year 2019~2020 is a key for management of emergency or disaster situation in district. It will play a significant role to address the unexpected natural and manmade disasters that occur in the district. The information available in DDMP is valuable in terms of its use during disaster period. Based on the history of various major incidents & disasters that occur in the district, the plan has been designed. Utmost attention has been paid to make more authentic and accurate for its rational use during the emergency or disaster period in the district. This plan has been prepared as per the guidelines provided by the National Disaster Management Authority (NDMA). While preparing this plan, most of the issues, relevant to crisis management, have been carefully dealt with. During the time of disaster there will be a delay before outside help arrives. At first, self help is essential and depends on a prepared community which is alert and informed. Efforts have been made to collect and develop this plan to make it more applicable and effective to handle any type of disaster. The DDMP developed involves some significant issues like Incident Response System (IRS), Hazard, Risk, and Vulnerability and, the response mechanism in disaster management. In fact, the response mechanism, an important part of the plan is designed with the IRS, a best model of crisis management has been included in the response part for the first time. It has been the most significant tool to the response manager to deal with the crisis within the limited period and to make optimum use of the available resources. Details of resources are given an importance in the plan so that during disaster their optimum use can be derived. The resource inventory, It will give the detail information to any officer at the time of disaster. S/he can view the available resources and order them at the time of disaster. The most necessary equipments, skilled manpower and critical supplies needs to be included in the inventory resources. During disaster, the resources from this website can be ordered without delay which will make the response time lesser. List of Nodal Officers of Emergency Support functionaries and their resources, control room of various departments, ambulances, blood banks, public health centers, and government and private hospitals, School's have been included in this plan. As a whole, this is a genuine effort of district administration to develop the plan and if you have any suggestions and comments, be free to convey the same so that we can include them in the next edition.

We are thankful to all the institutions and persons who have provided us the vital information in process of making the Plan.

Sj. Manoj Kumar Mohanty, OAS' S
Collector & District Magistrate, Angul
&
Chairman, District Disaster Management Authority, Angul

FORWARD

As per the Disaster Management Act, 2005, every district shall prepare and publish the District Disaster Management Plan (DDMP), which shall consist of mapping of various disasters and the vulnerable areas of the district, measures to mitigate them and define the administrative framework for coordination and dissemination of such information to the general public. Angul district has embarked on the path of preparing and publishing a comprehensive DDMP that shall address all the above concerns. Angul district has been hit by various kinds of disasters over the years. The disasters occurring in Angul are both nature triggered and man induced. Nature's fury over Angul takes shape of, cyclones, floods, lightning, and occasional epidemics. The man induced disasters affecting Angul district are recurrent Oil tanker accidents, road rail boat accidents, fire accidents and Industrial accidents. In this context, a dedicated effort has been made by the DDMA, Angul district to prepare a comprehensive DDMP for the year 2019 ~2020 under the stewardship of District Administration & OSDMA (Odisha State Disaster Management Authority). We have prepared a complete list of possible disasters in each village, collated the history of disasters, Standard Operating Procedure (SOP) for each such disaster, contact numbers of all the Nodal officers, Diving experts and QRTs, inventoried the entire disaster management equipment, list of medical facilities and a Hazard specific Crisis Management Plan. I sincerely wish that this District Disaster Management Plan (DDMP- 2019 ~2019) of Angul will assist the Disaster Mitigation efforts of the district a great deal and subsequently reduce the loss of life and property due to these disasters.

Mr. Tapan Kumar Satapathy (OAS) S

Additonal District Magistrate

Collectorate, Angul

List of Abbreviations

Sl No.	Abbreviation	Explanations
01	ARMVs:	Accident Relief Medical Vans
02	BIS:	Bureau of India Standards
03	BMPTC:	Building Materials & Technology Promotion Council
04	BDMC:	Block Disaster Management Committee
05	CBOs:	Community based Organisations
06	CBRN:	Chemical, Biological, Radiological and Nuclear
07	CSR:	Corporate Social responsibility
08	CRF:	Calamity Relief Fund
09	CWC:	Central Water Commission
10	DDMA:	District Disaster Management Authority
11	DDMP:	District Disasater Management Plan
12	DCMC:	District Crisis Management Committee
13	DM:	Disaster Management 3 DMC: Disaster Management Cell
14	DEOC:	District Emergency Operation Centre
15	EQ:	Earth Quake
16	ESF:	Emergency Support Functions
17	GIS:	Geogrphic Information System
18	GSI:	Geological Survey of India
19	GOI:	Govt. of India
20	GPS:	Global Positioning System
21	HPC:	High Powered Committee
22	IAY:	Indira Awas Yojana
23	IAG:	Inter Agency Co ordination
24	ICIMOD:	International Centre for Integrated Mountain Development
25	IRS:	Incident Response sytem
26	IRT:	Incident Response Team
27	ICT:	Inforamtion and communication Technology
28	IDRN:	Indian Disaster Resource Network

29	IDKN:	Indian Disaster Knowledge Network
30	IMD:	Indian Meteorological Department
31	ITK:	Indegenious Technical Knowledge
32	KMPH:	Kilometre Per Hour
33	L/W:	Left width
34	MC:	Municipal Corporation
35	MDR:	Major District Road
36.	MFA:	Medical First Aid
37	MHA:	Ministry of Home Affairs
38	MM:	Milimeter
39	NCCFG:	National Calamity Contigency Fund
40	NDEM:	National Database for Emergency Management
41	NDMA:	National Disaster Management Authority
42	NDMF:	National Mitigation Fund
43	NDRF:	National Disaster Response Force
44	NEC:	National Executive Committee
45	NGOs:	Govermnetal Organisations
46	NH:	National Highways
47	NEOC:	National Emergency Operation Centre
48	NIDM:	National Institute of Disaster Management
49	NSDI:	National Special Data Infrastructure
50	NYKS:	Nehru Yuba Kendra Sangathan
51	ODR:	Other District Roads
52	PPP:	Public Private Partnership
53	PRIs:	Panchayati Raj Institutions
54	QRT:	Quick Response Teams
55	RH:	Reproductive Health
56	R/F:	Rainfall
57	R/W:	Right Width
58	SAARC:	South Asian Association for Regional Cooperation
59	SAR:	Search and Rescue
60	SASE:	Snow and Avalanche Study Establishment
61	SC:	Schedule Caste

62	SCMC:	State Crisis Management Committee
63	SDMA:	State Disaster Management Authority
64	SDRF:	State Disaster Response Force
65	SEC:	State Executive Committee
66	SH:	State Highways
67	SOI:	Surveyor general of India
68	SOPs:	tandard Operating Procedures
69	UN:	United Nations

Chapter -01

INTRODUCTION



INTRODUCTION

Generally we mean that “disaster” a serious disruption, occurring over a relatively short time, of the functioning of a community or a society involving widespread human, material, economic or environmental loss and impacts, which exceeds the ability of the affected community or society to cope using its own resources. A disaster is not just the occurrence of an event such as an earthquake, flood, conflict, health epidemic or an industrial accident; a disaster occurs if that event/process negatively impacts human populations.

Need of a Planning for Angul District, Odisha :

District Disaster Management Authority (DDMA), headed by the District Magistrate is the Apex Body for Disaster Management in Angul District. The setting up of the DDMA and the creation of an enabling environment for institutional mechanisms at the State and District levels is mandated by the Disaster Management Act, 2005. Angul District is an integral part of the state of Odisha and so the vulnerabilities and risks at stake are not very different from other districts. Some of the common disasters in Angul District could be listed as regular and increased numbers of Road accidents, flood, forest fire, explosion of LPG cylinders causing multi injury, death, and loss of property and epidemic. Angul district is one of the industrial district in Odisha so numbers of LPG loaded trailers are moving on the NH & other local roads to different industries. We cannot rebuild our environment and our structures no matter how unsafe they are, we still have a long way to go to achieve these goals but what we can do write now is improve our skill to fight better any calamity that strikes us and stand tall in wake of a disaster. The Angul District Disaster Management Plan (DDMP) 2019-2020 formulated with a view to create an effective and realistic strong fail proof communication authentic and accurate data base, full proof documentation and rehearsal in the community in the shortest possible time with minimum simple orders and procedures so that the people will get maximum benefit. The plan optimum utilization of men, materials available resources etc. With no gaps or no overlaps to mean for ensuring quickest approach for rescue, rehabilitation and to avert further miseries of the calamity stricken people. The DDMP would Act like true friend, which will guide the entire administration machinery, provide courage to the community to face the eventuality bravely and boldly. Angul District is vulnerable to many hazards both natural and human induced. The need of an hour is better and flexible planning for reducing the maximum losses. The hazards for which the District is more vulnerable are flood, cyclone, Earthquake, forest fire, explosion of LPG cylinders causing multi injury, death, and loss of property and epidemic. The Disaster Management Plan need to be updated shortly for the effective management of the disasters and it means that the disaster management plan should be flexible. The present study i.e. District Disaster Management Plan is an assessment of the existing situation with strategies to improve it over the years. It may serve as a guidebook for District administration to take measures to reduce the vulnerabilities of areas under its jurisdiction and improve the capacities of its people. It may also provide an inventory of resources that can be tapped in wake of a crises situation and thus help the administration cope in a better manner.

INTRODUCTION OF DM ACT : 1

Under the DM Act 2005, it is mandatory on the part of District Disaster Management Authority (DDMA) to adopt a continuous and integrated process of planning, organizing, coordinating and implementing measures which are necessary and expedient for prevention as well as mitigation of disasters. These processes are to be incorporated in the developmental plans of the different departments and preparedness to meet the disaster and relief, rescue and rehabilitation thereafter, to minimize the loss. Section 31 of Disaster Management

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

1.1.1 Evoloution of DDMP

VOLUTION OF THE PLAN IN BRIEF:



The DDMP has been prepared on the basis of various guidelines issued from time to time by the National Disaster Management Authority (NDMA), State Disaster Management Authority (SDMA), information received from the different line department and in accordance with the model framework prescribed by the NDMA. The draft DDMP is discussed in brief in the meeting of the DDMA/DDMC and then sent to the State Govt. Revenue Deptt.(Nodal Deptt. for Disaster Management) for approval / suggestion if any to make the plan more effectively and holistically . It is updated at least once every year based on an inbuilt continuous monitoring and evaluation process and receiving the information.

Methodogoloy to be followed for the preparation of DDMP

Preparation of a multifaceted plan document is neither possible with a single agency nor an individual. Sepahijala district has been taken various measures to preprare this document and make it as perfect as possible. The major steps involved in preparing the plan document include the following steps (Figure :)

1. Data collection from all line departments,
2. Data analyzing,
3. Discussion with experts,
4. Referring national and international literatures,
5. Preparation of action plans for departments,
6. Preparation draft plan document,
7. Mock drill to check the viability and feasibility of implementation methodology,
8. Vide circulation for public and departmental comments and
9. Preparation of the final plan document

Aims and Objectives: The DDMP identifies the roles and responsibilities of all the government line departments and other supporting organizations:

-  To improve preparedness at the district level, through risk and vulnerability analysis of disasters and to minimize the impact of disasters in terms of human, physical and material loss.
-  To ascertain the status of existing resources and facilities available with different departments & agencies involved in the management of disaster risks in the district that enhance the capability of the district administration

in handling the disaster risks. This enables the district to respond to a disaster in an effective way and builds confidence across different segments of society.

- ✚ To develop a framework for proper documentation of future disasters in the district, to have an update on critical information essential to a plan, to critically analyze and appraise response and to recommend appropriate strategies.
- ✚ To evolve ADDMP as an effective managerial tool within the overall policy framework of Government of Odisha.

Preparation and Approval of DDMP:

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

The District Collector discussed the modalities and seek views for preparation of a holistic plan in the meeting held on 6th April 2017 in the Collectorate Conference Hall. It was also discussed that the information collection, compilation and completion of the DDMP preparation should be completed by 30th April 2017. After finalisation of the DDMP, the DDMA will approve the same by the last week of May 2017 and then send a copy of the DDMP to the State Disaster Management Authority.

District level Consultation Workshop 9th May, 18

For the coming years, it was decided that the DDMP preparation will start in January 2018 and complete by February 2018.

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

Multi-Disaster Response Plan:

The Angul District Disaster Management Plan (ADDMP) dresses the districts' response to disaster situations such as earthquakes, landslides, cyclones, epidemics, off-site disasters and roads accidents and fires. The present plan is a multi-hazard response plan for the disasters and outlines the institutional framework required for managing such situations. However, the plan assumes a disaster specific form in terms of the actions to be taken by the various agencies involved in the disaster. The from-end or local level of any disaster response organization will differ depending upon the type of disaster, but at the level of the back-end i.e., at the controlling level at the district it will almost remain same, for all types of disasters.

This document provides basic information required for the management of disasters in Angul District by:

- Defining the Risks and Vulnerabilities of citizens of the district to different disasters;
- Identifying private and public sector stakeholders with prime and supporting responsibilities to reduce or negate these vulnerabilities
- Defines actions to be taken by these parties to avoid or mitigate the impact of possible disasters in the district.
- Subsidiary plans are developed at the:
 - At the Village and G.P level;
 - For major industrial sites located in the district (Off-site Emergency plan for Industrial Accidents available with DIS);
 - Through Standard Operating Procedures (SOPs) of Line Departments detailing how specific disaster response actions will be accomplished.
- Developing and maintaining SOPs are the responsibility of parties with designated prime or supporting tasks assigned by this plan.

Keeping in view all the possible aspects of the aforesaid problem in mind and to keep the Administration prepared in all possible ways to respond properly to various Disaster situations with minimum delay, possible Disaster situations have been identified and the component plans have also been identified & mentioned in detail in this document.

Non-Governmental Organization (NGOs) and Voluntary Agencies:

The capacity of non-governmental organization and voluntary agencies to reach out to community groups and their sensitivity to local traditions of the community, gives them an added advantage during disasters. Some of the agencies, both from within and outside the state, have technical expertise and capabilities which can be brought into managing difficult situations. During the post-disaster phase, therefore, efforts should be made to enlist partnership of some of the NGOs with relevant expertise, to assist the district administration in the process of relief and rehabilitation.

Role of District Administration:

The Deputy Collector, in charge of Emergency is assisted by all the administrative officers incorporating with line departments, NGOs and multilateral agencies is responsible for developing plans and activities to mitigate (Preparedness & prevention) during disaster.

Authority for DDMP Preparation & Approval :

Under Section 31 of the DM Act -2005 the District Plan:

1. There shall be a plan for disaster management for every district of the State.
2. The District Plan shall be prepared by the District Authority, after consultation with the Different Line departments, local authorities and

- having regard to the National Plan and the State Plan, to be approved by the State Authority.
3. The District Plan shall include -
 - (a) The areas in the district vulnerable to different forms of disasters;
 - (b) The measures to be taken, for prevention and mitigation of disaster, by the Departments of the Government at the district level and local authorities in the district;
 - (c) The capacity-building and preparedness measures required to be taken by the Departments of the Government at the district level and the local authorities in the district to respond to any threatening disaster situation or disaster;
 - (d) The response plans and procedures, in the event of a disaster, providing for –
 - (i) Allocation of responsibilities to the Departments of the Government at the district level and the local authorities in the district;
 - (ii) Prompt response to disaster and relief thereof;
 - (iii) Procurement of essential resources;
 - (iv) Establishment of communication links; and
 - (v) The dissemination of information to the public;
 - (e) Such other matters as may be required by the State Authority.
 4. The District Plan shall be reviewed and updated annually.
 5. The copies of the District Plan referred to in sub-sections (2) and (4) shall be made available to the Departments of the Government in the district.
 6. The District Authority shall send a copy of the District Plan to the State Authority which shall forward it to the State Government.
 7. The District Authority shall, review from time to time, the implementation of the and issue such instructions to different departments of the Government in the district as it may deem necessary for the implementation thereof.

Evolution of DDMP:

The DDMP was first evolved in 2004 during the implementation of Government of India-United Nations Development Programme Disaster Risk Management Programme. With the enactment of the National DM Act, 2005 it provides for the preparation of the District Plan as per Section 31. District Disaster Management Plan, Angul district of Odisha .

Stakeholders & their responsibilities:

The DDMA with Collector Cum District Magistrate as the RO and other line departments at district HQ are the main stakeholders in DM. They are responsible to deal with all phases of DM (Preparedness, Prevention, Mitigation, Response& Recovery) within the district. Other technical institutions, community at large, local self-governments, NGOs etc. are also stakeholders of the DDMP.

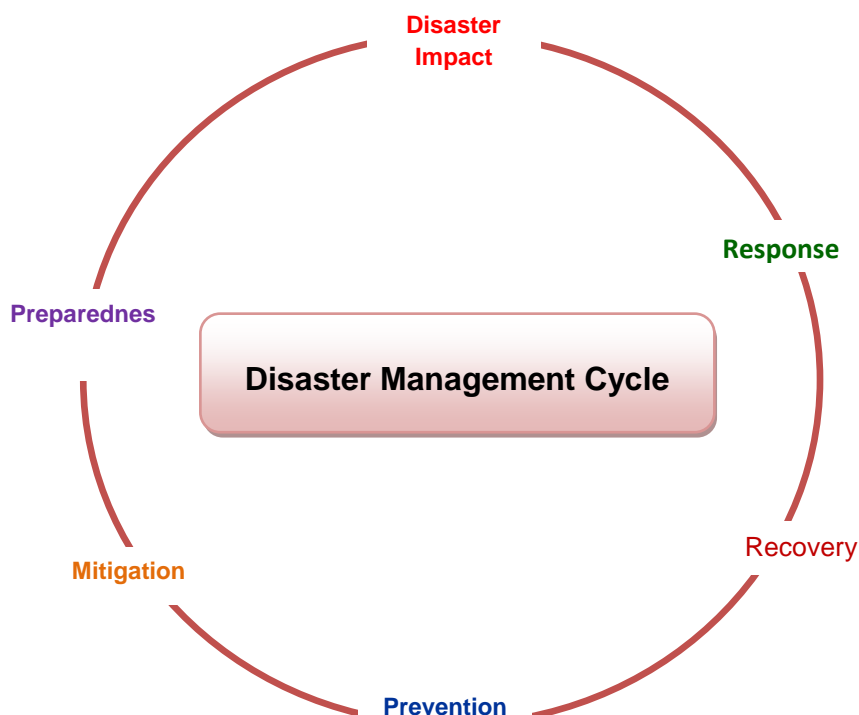
The role of the stakeholders have been prepared with the avowed objective of making the concerned organizations understand their duties and responsibilities regarding disaster management at all levels and accomplishing them.

Stakeholders & their responsibilities:

As per Section 31(1) of the DM Act 2005 every office of the Government of India and of the State Government at the district level and the local authorities shall, subject to the supervision of the District Authority are following:-

1. Prepare a Disaster Management Plan setting out the following namely:-
 - Provisions for prevention and mitigation measures as provided for in the District plan and as is assigned to the department or agency concerned
 - Provisions for taking measures relating to capacity-building and preparedness as laid down in the district plan;
 - The response plans and procedures, in the event of, any threatening disaster situation or disaster.
2. Coordinator the preparation and the implementation of its plan with those of the other organizations at the district level including local authorit, communities and other stakeholders.
3. Regularly review and update the plan.
4. Submit a copy of its disaster management plan.

HOW TO USE THE PLAN: Chart -01





containing contact numbers and SOPs accompanies this document

Approach to Disaster Management:

The Government of Gujarat takes an inclusive approach to disaster management. Disaster impact decrease is divided into three broad areas:

Warning, Relief and Recovery:

Necessary actions are intended to eliminate the loss of life and property and hardship due to disasters. Plans and SOPs at District level should provide as seamless as possible provision of warning, relief and recovery assistance to avoid or reduce losses and hardship.

The focal point for early warning, relief and recovery is the District Collector, who directs and coordinates these efforts within the district. The Collector is also answerable for coordinating warning, relief and recovery with similar activities in neighbouring districts and with the OSDMA and Revenue Department.

Mitigation, Preparedness and Prevention:

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

- Long term planning for mitigation, preparedness and prevention investments in the district,
- Enforcement of regulations, particularly building and safety codes and land use plans,
- Review and evaluation of development plans and activities to identify ways to reduce risks and vulnerability, and,
- Capacity building including warning, the provision of relief and recovery assistance and community-level identification of risk and vulnerability.

The Collector, assisted by the District Emergency Officer is responsible for developing plans and activities to effect mitigation, preparedness and prevention using the mechanism noted above.

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

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

Base on the interim assessment of risk and vulnerabilities, the District will focus on the following areas for mitigation, preparedness and prevention;

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

Finance:

The finance arrangement as per the fund granted by OSDMA / State nodal agencies to the district. District Collector has authorities to distribute / impart the fund to the counter partners of Disaster management in the District as per required activities, according to the instructions of Government of Odisha.

Preparations and Revision of the Plan:

The District Collector is responsible for the preparation and revision of the District Disaster Management Plan in collaboration with the line departments and other organizations in the district. The plan should be reviewed annually/half yearly and updated:

- When significant changes in the nature of any hazards
- Lessons learnt following any major disaster or

- When there is any significant change to organization or responsibility of primary members of the task forces defined in the plan.

Preparation Process:

- District level Consultation workshop with District administration, line departments and Agency, NGO, CSR and authorities of District.
- Sharing of data format designed by OSDMA and Collection of Data and Plan from line departments and agencies.
- Data sharing with DDMA and Line department & preparation of plan.

DDMA shall compile its learning and proposed new mechanisms for improvement of the capacity to deal with disasters. The Collector is further responsible for developing long term relief, recovery and rehabilitation plans during the course of a disaster. These plans will include steps to reduce disaster impact in the future and be coordinate with the OSDMA in terms of policy and implementation.

District Collector & District Magistrate, Angul.

- Facilitate and coordinate with local Government bodies to ensure that pre and post Disaster Management activities in the district are carried out.
- Assist community training, awareness programmes and the installation of emergency facilities with the support of local administration, non-governmental organizations and the private sector.
- Function as leader of the team and take appropriate actions to smoothen the response and relief activities to minimize the adverse impact of disaster.
- Recommend Relief Commissioner and State Government for declaration of disaster.

Different Departments at District level

Every Office of the State Government at the District level shall prepare a Disaster Management Plan setting out of the following:

- Provisions for prevention and mitigation measures as provided in the District
- Plan and as assigned to the department or agency concerned;
- Provisions for taking measures relating to capacity-building and preparedness as laid down in the District Plan;
- The response plans and procedures, in the event of, any threatening disaster situation or disaster;
- Coordinate the preparation and the implementation of its plan with those of the other organizations at the district level including local authority, communities and other stakeholders;
- Regularly review and update the plan; and Submit a copy of its Disaster Management Plan, and of any amendment thereto, to the District Authority. District Disaster Management Plan, Angul District, Odisha.

- District Disaster Management Authority, Angul.

Local Authorities

- Provide assistance to DC in Disaster Management activities.
- Ensure training of its officers and employees on Disaster Management
- Ensure that resources relating to Disaster Management are maintained as to be readily available for use in the event of any threatening disaster situation or disaster.
- Ensure that all construction projects under it conform to the standards and specifications laid down.
- Carry out relief, rehabilitation and reconstruction activities in the affected area within the district.

Private Sector & Corporate

- Encourage for their active participation in the pre-disaster activities in alignment with the overall plan developed by the DDMA or the DC.
- Adhere to the relevant rules regarding prevention of disasters, as may be stipulated by relevant local authorities.
- As a part of Corporate Social Responsibility (CSR) undertakes DRR projects in consultation with the DC for enhancing district's resilience.

NGOs/CBOs and Volunteer Agencies

- Assist in prevention and mitigation activities under the overall direction and supervision of the DDMA or the DC.
- Participate in all training activities organized and should familiarize themselves with their role in Disaster Management.

Citizens

It is the duty of every citizen to assist the DC or such other person entrusted with or engaged in Disaster Management whenever demanded generally for the purpose of Disaster Management.

How to use DDMP Framework

As per Section 31 of DM Act 2005 it is mandatory to prepare a DDMP, for the protection of life and property from the effects of hazardous events within the district.

- The Collector & DM as the chairman of DDMA has the power of overall supervision and direction control as may be specified under State Government Rules/SDMP guidelines.
- The DEOC will be staffed and operated as the situation dictates. When activated, operations will be supported by senior officers from line

department's government agencies; private sector and volunteer organizations may be used to provide information, data and resources to cope with the situation.

- Facilities vital to operation of the district government functions have been identified.
- The Collector & DM/RO or his designee will coordinate and control resources of the District.
- Emergency public information will be disseminated by all available media outlets through the designated media and information officer.
- Prior planning and training of personnel are prerequisites to effective emergency operations and must be considered as integral parts of disaster preparations.
- Coordination with surrounding districts is essential when events occurred that impact beyond district boundaries. Procedure should be established and exercised for inter district collaboration.
- Departments, agencies and organizations assigned either primary or supporting responsibilities in this document must develop implementation documents in order to support this plan.
- When local resources prove to be inadequate during emergency operations request for assistance will be made to the State or higher levels of government and other agencies in accordance with set rules and procedures.
- District authority will use normal channel for requesting assistance and resources, i.e., through the DEOC to the SEOC. If state resources have been exhausted, the state will arrange to provide the needed resources through central assistance.
- The DEOC will coordinate with the SEOC, Agencies of the Govt. of India like IMD/CWC to maintain up to-date information concerning potential flooding, cyclones etc. As appropriate, such information will be provided to the citizens of the affected areas in the district.
- Upon receipt of potential problems in these areas, DEOC/designated official will appropriately issue alert and notify action to be taken by the residents.
- Disaster occurrence could result in disruption of government functions and, therefore, all levels of local government and their departments should develop and maintain procedures to ensure continuity of Government action.

Approval Mechanism of DDMP

As per Section 30 of DM Act 2005, the DDMA acts as the district planning, coordinating and implementing body for disaster management and take all measures for the purpose of DM in the district in accordance with the guidelines laid down by the National Authority and the State Authority. Accordingly, the District Plan is prepared by the DDMA, after consultation with the local authorities and having regard to the NDMP and the SDMP. DDMA Committee will approve the DDMA under chairmanship of Chairperson DDMA and Collector & DM.

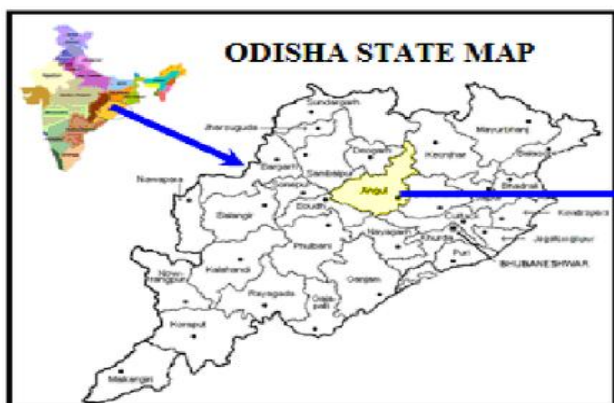
Plan review and updation

The District Plan shall be reviewed and updated annually as per Section 31 (4) of the DM Act 2005. Every year the DDMP of the district will be reviewed and updated by the DDMA (District Disaster Management Authority) of Angul. The line departments will share the update information pertaining to any changes and updates in the DDMP at the end of April of each year.

Chapter -2

District Profile

History & Location: The District of Angul situated at the heart of Odisha it was part of undivided Dhenkanal District till March 1993, but for the administrative convenience, Dhenkanal District was divided into two parts i.e. Dhenkanal and Angul vide State Government Notification No. DRC-44/93/14218/R. dated 27 March 1993. Angul District came into existence as a separate District on April 1, 1993. The District is surrounded by Cuttack & Dhenkanal on the east, Sambalpur & Deogarh on the west, Sundargarh & Keonjhar on the north and Phulbani on the south. Covering an area of 6232 sq.km, Angul District is located at Latitude 20.50 North to 22.50 North Longitude. The altitude of this place is 564 to 1187 mts.



Angul District is densely populated as per the 2011 census. The District has 1930 villages having 12,73,821 population. Total population comprises of 6,55,718 male population and 6,18,103 female population. District's rural

population is more compared to its urban population, as is the case in almost all other Districts of the state. Total rural population of the District is 10,67,275 while total urban population is 2,06,546 as per 2011 census. The District has 2,39,552 SC and 1,79,603 ST population.

HISTORICAL PERSPECTIVE:

Angul district is like a link between the western and coastal halves of Odisha where the prehistoric and post historic relics are found in village Bhimakand, Kankili, Kulei, Samal, Sanakerjang, Kaliakata, Paranga, Kerjang, Tikarapara and Pallahara.

The geographical location of Angul made the Bhanjas of Angulaka-pattana, the Sulkis of Kodalaka Mandala, the Nandodbhavas of Airavatta Mandala, the Tungas of Yamagartta Mandala rule over it. The *Bhaumakaras* declined by the middle of the 10th Century AD when the eastern part of Odisha including the Dhenkanal region passed to the hands of the *Somavamsis* of South Kosala. The *Somavamsis* in their turn were ousted by the *Gangas* and Odisha was occupied by Chodagangadeva some time before 1112 AD. The Ganga rule lasted as long as till 1435 AD when a new Solar dynasty founded by Kapilendradeva came to power. About the year 1533-34, Govinda Vidyadhar put an end to the Suryavamsi rule and started the rule of Bhoi dynasty, which lasted up to 1559 when Mukundadeva, belonging to the Chalukya family, forcibly occupied the throne. In 1568, the Afghans of Bengal invaded Odisha, and defeated and killed Mukundadeva after which Odisha came under their occupation. During all these periods of dynastic changes, Angul played no remarkable role in history and this territory simply passed from one political authority to the other. During the period of dynastic changes, the history of Angul is marked by its continuous transfer from one political authority to the other. During the rule of Suryavamsis and the Bhois, some new feudal states developed as self-contained political units. These were Angul, Talcher, Pallahara and Athamallik. Somanath Singh was the last king of Angul and he ruled for a long



period of 33 years from 1814 to 1847 when he was deposed by Government. The State was confiscated by the Government in their Resolution, dated 16 September, 1848 and Angul passed under the direct rule of the British being administered by the Superintendent of the Tributary Mahals, through the agency of an officer known as Tehsildar, who collected revenue and administered justice, until 1891 when Angul was constituted as a separate district.

LOCATION OF DISTRICT:

The district of Angul came into existence as an independent district with effect from 1st April 1993 and lies between 200 31' N and 210 40' N latitude and 840 15' E to 850 23' E longitude. The district covers a geographical area of 6232 square kilometers and stands as 11th largest district among 30 districts in the State. Angul is bounded on the north by Sundargarh district, on the west by Deogarh, Sambalpur and Sonapur districts, on the south by Boudh and Nayagarh districts, on the south-east by Dhenkanal and Cuttack and on the east by Keonjhar District. Although new, strategically it is the most advanced district because It gives highest revenue to the Government due to vast coal mines located in its abode.

ADMINISTRATIVE SET-UP:

The district is mostly rural in character having 1930 villages with 4 subdivisions, 8 blocks, 9 towns and 222 Gram Panchayats. The district has 5 Assembly constituencies and 2 parliamentary constituencies (coming under Sambalpur and Dhenkanal PC respectively). The detailed administrative set-up of the district is reflected in the following matrix.

Geographical and Population details of the District				
Geographical Area :	6,375.00 sq.km	Area under Forest :	2716.82 sq.km	42.62 %
Population (2011 Census)		Total :	1273821	in %
		Male :	655718	51
		Female :	618103	49
		Rural :	1067275	84

	Urban :	206546	16
	Scheduled Caste :	239552	19
	Scheduled Caste Male	121459	10
	Scheduled Caste Female :	118093	9
	Scheduled Tribe :	179603	14
	Scheduled Tribe Male :	89980	7
	Scheduled Tribe Female :	89623	7
Population Density :	179 (Per sq.km)		
Literacy	Total Literate :	869456	68
	Literate Male :	494425	39
	Literate Female :	375031	29
	Total Illiterate :	404365	32
	Illiterate Male :	161293	13
	Illiterate Female :	243072	19
Households	Total Households :	297050	
	Rural Households :	249733	84
	Urban Households :	47317	16
	BPL Households (2011 Census) :	--	--
	SC/ST Households (2011 Census) :	--	--

Administrative Setup:

Administrative setup of the District

No. of Sub-Divisions :	4	No. of Tehsils :	8
No. of Municipalities/Corporation :	2	No. of N.A.Cs :	1
No. of Blocks :	8	No. of Police Stations :	22
No. of Gram Panchayats :	222	No. of Inhabited Villages :	1661
No. of Uninhabited Villages :		No. of villages :	1930

Source: District Statistical Handbook, Angul

DEMOGRAPHY:

As per Census 2011, the population of Angul district is 1,273,821 of which males and females are 655,718 and 618,103 respectively. As per the census 2001, the population of the district was 1,140,003 of which males constituted 587,234 and females constituted 552,769. The population of Angul District constituted 3.03 percent of total population of the State. There has been observed a decennial that the density of population growth of the Angul district is 11.74 in comparison to 2001 census.

Population details : (2011 Census)

Population details of the District						
Population			Category			
Total	Male	Female	SC	ST	OBC	GEN
1273821	655718	618103	239552	179603	N.A	N.A

Table 2, Comparative picture of Population Parameters of Angul District in 2001 & 2011

Description	2011	2001
Total Population	1,273,821	1,140,003
Male	655,718	587,234
Female	618,103	552,769
Population Growth	11.74%	18.62%
Area Sq. Km	6,375	6,375
Density/km ²	200	179
Proportion to Orissa Population	3.03%	3.10%
Sex Ratio (Per 1000)	943	941

Child Sex Ratio (0-6 Age)	889	937
Average Literacy	77.53	68.79
Male Literacy	85.98	81.43
Female Literacy	68.64	55.37
Total Child Population (0-6 Age)	152,403	163,943
Male Population (0-6 Age)	80,666	84,641
Female Population (0-6 Age)	71,737	79,302
Literates	869,456	671,433
Male Literates	494,425	409,260
Female Literates	375,031	262,173
Child Proportion (0-6 Age)	11.96%	14.38%
Boys Proportion (0-6 Age)	12.30%	14.41%
Girls Proportion (0-6 Age)	11.61%	14.35%

Demography:

[Demography to cover following points either in descriptive form or in tables]

Households and its distribution:

Sl. No	Total Number of Families/HH	Category		Category				Category	
		Rural	Urban	SC	ST	OB C	GEN	BPL	APL
1	297050	24973 3	47317	23955 2	17960 3				

Population and its composition:

Sl. No	Population			SC		ST		OBC	
	T	M	F	M	F	M	F	M	F
1	127382 1	65571 8	61810 3	121459	118093	89980	89623		

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

Religion wise distribution of Population:

Sl.	Name of	Total	Category
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No.	the Block/ ULB	Population	Hindu	Muslim	Christian	Sikh	Budhist	Jain	Others
1	Total=8	12,73,821	1258684	7512	3383	812	226	971	2197

Age Group :

Sl. No.	Total Population	0- years	6-14 years	15-59 years	60 years and above
1	1273821	152403			

Sex Ratio:

1	Sex Ratio (Females per 1000 males):	943
2	Sex Ration(0-6 Years):	889

Literacy Rate:

	Total	Male	Female
Literacy Rate	77.53	85.98	68.64

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

Administrative Setup:

The Administrative headquarters of the Angul District is located at Angul city. In the present scenario of the administrative set up, there are 4 sub division, 8 Tahsils and 8 blocks in the District. There are total number of 209 Gram Panchayats, 2 Municipalities, 1 Notified Area Council (NAC), and 22 Police stations functioning in the District of Angul.

Climate & Rain fall: The climatic condition of Angul District is much varied. The average annual rainfall of the District is 1421 mm. However there is a great variation of rainfall from year to year. The rainfall in the District during the last 10 years varied between 896 mm & 1744 mm. The best time to visit this District is during winter.

Climate

The climatic condition of the district is hot and moist sub-humid. The climatic condition of Angul is much varied. It has mainly 4 seasons. The summer season is from March to mid-June, the period from mid-June to September is the rainy season, October and November constitute the post monsoon season and winter is from December to February. The best time to visit this district is during

winter. The average annual rainfall of the district is 1421 mm. The normal rainfall of the district is 1421 mm. However, the rainfall pattern is erratic and varies from year to year. The kharif crop suffers due to want of rains, during the critical months of July and August. The district suffered from drought during 1996, 2000, 2002, 2010, 2011 & 2015.

Year wise Rain fall data of Angul district .

Year	Month	Normal Rainfall	Actual Rainfall	Deviation in %
2008	June	225.1	371.3	(+) 146.3
	July	347.7	269.9	(-) 77.8
	August	357.5	283.5	(-) 74.0
	September	217.5	384.5	(+) 131.0
2009	June	225.1	53.8	(-) 171.3
	July	347.7	636.7	(+) 289.0
	August	357.5	271.9	(-) 85.6
	September	217.5	104.8	(-) 112.7
2010	June	225.1	87.5	(-)137.6
	July	347.7	145.9	(-)124.8
	August	357.5	87.7	(-)123.5
	September	217.5	162.4	(-)55.1
2011	June	225.1	136.0	(-)18.6
	July	347.7	92.07	(-)206.9
	August	357.5	313.8	(-)43.7
	September	217.5	490.6	(+)273
2012	June	225.1	149.33	(-)91.94
	July	347.7	346.09	(-)1.61
	August	357.5	418.45	(+)60.95
	September	217.5	239.81	(+)22.31
2013	June	225.1	258.20	(+)33.10
	July	347.7	371.86	(+)24.16
	August	357.5	189.20	(-)168.3
	September	217.5	189.66	(-)27.84
2014	June	225.1	85.30	(-)139.08
	July	347.7	575.71	(+)228.01
	August	357.5	401.63	(+)44.13
	September	217.5	262.36	(+)44.86
2015	June	225.1	218.86	(-) 6.24
	July	347.7	343.20	(-)4.41
	August	357.5	224.64	(-)132.86
	September	217.5	142.2	(-) 75.3
2016	June	225.1	126.63	(-43.75)
	July	347.7	267.16	(-23.16)
	August	357.5	389.86	(+) 9.05
	September	217.5	143.23	(-) 34.15

2017	June	225.01	201.05	(-) 10.68
	July	347.7	213.38	(-)38.63
	August	357.7	213.05	(-) 40.41
	Sep	217.5	143.60	(-)33.93
2018	June	225.1	123.425	(-) 27.31
	July	347.7	333.2	(-) 4.19
	Aug	357.5	299.3	(-) 16.28
	Sep	217.5	295.03	(+)35.65

Annexed in Volume II

Rain Recording Stations:

Total No. of Rain Recording stations in the District :

Sl. No	Location of the Rain Recording Stations	Tel. No of Rain Recording Stations
1	Angul (Sub-Collector)	06764 - 230302
2	Athamallick (Sub-Collector)	06763 - 254222
3	Banarpal (Block)	06760 - 229222
4	Chendipada(Block)	06761 - 252323
5	Kaniha(Block)	06760 - 243522
6	Kishorenagar(Block)	06763 – 257016
7	Pallahara (Sub-Collector)	06765 – 279221
8	Talcher (Block)	06760 – 240209

Month wise Highest and Lowest Temperature recorded in the District:

Sl. No	Month	2017		2018		2019	
		Max (C ⁰)	Min (C ⁰)	Max (C ⁰)	Min (C ⁰)	Max (C ⁰)	Min (C ⁰)
1	March	41.7	13.6	39.1	18.0	40.1	15.6
2	April	44.3	18.0	43.5	19.0	46.8	19.6
3	May	45.5	18.0	47.0	22.2	45.6	20.0
4	June	44.0	20.0	42.7	23.6	43.6	18.6

Geography & Land

The district has a geographical area of 6.37 lakh ha, which is 4.09% of the total geographical area of the State. The district is gifted with abundant natural resources both forests and minerals. The total forest coverage of the district is 2716.82 sq km which is 42.62% of total geographical area. About 63% of people

reside as forest dwellers and depend on NTFP for earning their livelihood. The highest peak of the district is Malyagiri of Pallahara sub-division which is 1186 meter above MSL. Banamadali peak in Angul sub-division is 790 meter in height. In Athamalik sub-division the main peaks are Panchadhara and Hingamandal hills. Due to its geographical location and vast stretches it provides a great advantage to agriculture. The district economy is mainly agrarian. The development of industries stated considerably in the recent years. The total cultivable area of this district is 2, 16,403 ha covering 32.7% of the total geographical area of the district.

Water Resource & River System:

The district has two major rivers i.e. Mahanadi and Bramhani flowing round the year in its territory. Mahanandi marks the southern boundary of this district. River Brahmani enters the district through Rengali reservoir and passes through Talcher sub-division. Both these big rivers have innumerable large and small tributaries. Mainly Pallahara, Talcher and the major portion of Angul sub-division coming under the part of Bramhani basin. The basin of Mahanadi is spread over Athamalik sub-division and part of Angul sub-division. A multi-purpose dam has been constructed over the Brahmani river at Rengali for hydropower project where 250 MW of electricity is generated. A barrage has also been constructed 35 kms down-stream at Samal. This irrigation project is poised to irrigate 3,36,400 ha of land in the district of Angul, Dhenkanal, Cuttack, Jajpur and Keonjhar. Other water bodies of Angul are mountain streams, which are torrents in the rains and in the summer contain little or no water.

Drinking Water and sanitation

Financial Sanction for the District on projects in last 3 financial years :

Sl.	Name of projects	Year of sanction (Rs. In lakhs)			Total
		2007-08	2008-09	2009-10	
1	Piped Water Supply	1067.70	1825.76	592.98	3486.44
2	Tube Well	173.24	133.75	85.05	392.04
	Total	1240.94	1959.51	678.03	3878.48

Forest

The district is having 2716.82 sq km. forest area which is 42.62% of the total geographical area. Forest area is coming under Angul, Athamalik, Satakosia (WL) divisions and Pallahara range of Deogarh Forest Division. Angul Forest Division is the oldest Forest Division in the State and it was established in 1885.

Angul Division is one of the pioneer Divisions where scientific management of forests commenced. Satakosia Sanctuary is one of the unique echo-system of India. Angul Forest Division covers forest areas of Angul and Talcher civil sub-division of Angul district. The forest area consists of reserve forests, demarcated protected forests, un-demarcated protected forests and forests under revenue records. During passage of time Forests have been depleted due to illicit felling, uncontrolled grazing, fire, encroachments and developmental activities like setting up of power units, mines, irrigation projects and other industries. Sal is the main species in most of the forest Blocks coming under moist and dry deciduous vegetation. Piasal, Sisoo, Bandhan, Gambhar, Kurum are reducing fast while Char, Salai, Karada and Barabakalia are increasing in proportion. Teak is planted in the area. There are 146 different varieties of trees, 3 varieties of Bamboo, 59 shrubs, 46 herbs, 24 perennial grasses, 8 varieties of annual grasses and 57 varieties of climbers found in the forests. Some of the major NTFPs like the Lodha, Medha, Phenphena, Siali fibre, Mahua flower, Honey, Myrobalan Mango kernel and Gillo is available in the forests of Angul.

Topography:

The area is composed of undulating tracts of high ridges and low valleys. The different types of land like hills & hill slope, foothills, up land, medium and low lands are found in the district. The topographic situation of the district is marked by three major regions. The South and Western part comprises ranges of the Eastern Ghat Super group and the older metamorphic group. The Central portion is represented by sediments deposited in the Satpura-Mahanadi graven defined by pronounced NW-SE trending lineaments on a Precambrian platform, almost separating the Eastern Ghat Mobile Belt. The northern boundaries of Talcher Basin are faulted. On a regional scale, Talcher basin takes the shape of a north westerly plunging syncline with closure in the east and the younger horizon outcropping progressively towards west. On the other hand, the beds dip northerly and number of coal seams increases in that direction indicating a possible homoclinal structure. Three sets of intrabasinal faults trending E-W-NE-SW-WNW-ESE have been recognized. The north and north east part is occupied by hill ranges of Iron Ore Super group. The elevation varies from 76m to 1186m. The highest peak of the district is Malyagiri of Pallahara sub-division which is 1186 meter above MSL. Banamadali peak in Angul sub-division is 790 meter in height. In Athamalik sub-division the main peaks are Panchadhara and Hingamandal hills.

Soil

The soil characteristic of the district is variable in nature with a range of colours from high gray and pale yellow to deep gray and the textures from coarse sand to silt. The major soil types are red (alfisol), laterite and lateritic (ultisol and oxisol) with limited patch of forest soil (humous). Angul is coming under mid central table land and broad soil group is alluvial, red, lateritic, mixed red and

black. The soil is mostly acidic in nature. The available nitrogen in soil is low where availability of phosphorus and potassium are medium.

Socio-Economic profile: *[to be briefly described]*

Workforce participation rate- Male/ Female

Worker Details : (2011 Census)

Worker details of the District					
Main worker		Marginal worker		Non worker	
Male	Female	Male	Female	Male	Female
257720	59827	103227	105746	294771	452530

Land Holding Pattern: Agriculture occupies a vital place in the economy of Angul district. It provides direct and indirect employment to around 70 percent of the total work force of the district (2001 Census). The total cultivable area of this district is 2,16,403 ha constituting 32.7 percent of the total geographical area of the district.

Sl. No.	Name of the Block	Land less hosue hold	Share cropper	SM	MF	Medium, Famers	Large farmers
			NA	6481	10203		NA
			NA	5179	10140		NA
1	Angul	17845	NA	5320	10395		NA
2	Banarpal	17749	NA	4978	9689		NA
3	Chhendipada	16884	NA	4886	7966		NA
4	Athmallik	15673	NA	4392	6487		NA
5	Kishornagar	14136	NA	5439	9985		NA
6	Talcher	12109	NA	4392	6485		NA
7	Pallalahra		NA	5310	9379		NA
8	Kaniha	17508	NA				NA
9	Pallahara	16096		5439			
Total		128000		42185	9989		

Productivity of Major crops in the district are as follows : --

Crop Name	Net Sown Area In HA	Yield Per Acre	Seed Consumption IN Mts	Pesticide Consumptionin Qtls	Fertilizer Consumption
Pady (Khariff)	85890	24.48	42945	450	3912
Paddy (Rabi)	257	18.2	154	42	80
Wheat	22	18.5	8.8	1.8	1.8
Maize	1100	28.0	154.9	286	286
Ragi	10	2.2	1	0.2	0.2
Pulses	56243	10686	10686	308	308
Oilseeds	36765	1470	1470	184	184
Vegetables	17419	435.5	435.5	371	371
Chilli	2236	44.72	44.7	48	48

Land Utilisation Pattern in the District

The entire land position of Angul District is highly heterogenous in character. The district has a substantial area cover as forest land. In fact, the barren and incultivable land in the district is negligible. Nature has given a lot to Angul district having its varieties of soil and land classification which gives the locality economic viability and industrial prosperity. The other highlights of the land utilisation pattern is depicted as follows.

Name of the	Geographical	Forest area	Misc. and tree Perma-nent	
	area		grooves	pasture
District		(In Ha.)		
	(In Ha.)		(In Ha.)	(In Ha.)
Angul	638000	272000	23000	36000

Land put on Barren and Non-Agricult- icultivable

Area	land
(In Ha.)	(In Ha.)
48000	7000

However, the land utilisation pattern depending upon various parameters and classification of land is as follows:-

Year	Current fallow	Other Fallow	Net area sown
	(In Ha.)	(In Ha.)	(In Ha.)
2014	41000	17000	175000
2015	45000	17000	171000
2016	33000	17000	183000
2017	37000	17000	179000
2018	36000	17000	181000

Source : District Agriculture Strategy Handbook and Odisha Agriculture Statistics.

AGRICULTURE

The economy of the district is mainly agrarian. During 2011-12, the net area shown in the district was 1,71,000 ha as against 52,92,000 ha in the State i.e. is 3.23% of Odisha's net cultivable area. More than 70 per cent population directly or indirectly depend on agriculture. As per the district web site report, the total cultivable area of Angul is 2, 16,000 ha covering 33.85% of the total geographical area of the district. Paddy is the main crop in the district. More than 90% of the area is being cultivated with early medium and late variety of paddy. Most of the cultivated area in the district is covered under groundnut, sugarcane, maize, *kulthi*, *bengal gram*, *coriander*, *field pea* and vegetables.

Angul district is situated under the agro-climatic zone of mid central table zone of Odisha which is generally flat with undulating hilly areas. The soil type varies from rich red loam to gravelly soil of hill slopes. However, the cropping intensity of the district is 181 per cent during 2011-2012. Presently, the percentage of irrigated land in the district is only 21% in *Kharif* season and 9% in *Rabi* season. Out of the total cultivated land of 2,16,403 ha of the district high land accounted for 1,19,433 ha (55.19%), medium land 62,698 ha (28.97%) and low land is only 34,272 ha (15.84%).

HILLS

The highest peak of the District is Malyagiri Hill of Pallahara Sub-division which is 1187 metre above MSL. Banamadali peak in Angul Sub-Division is 790 meter in height. In Athamallik Sub-Division, the main peaks are Panchadhara and Hingamandal hills. Due to its geographical location and vast stretches it provides a great advantage to agriculture.

IRRIGATION

Assured irrigation is all the more necessary for improving production and productivity of crops. The total irrigated area in the district is 37 per cent of the net sown area. However, 6 out of the 8 blocks are having irrigation below 35 per cent. Out of 52 MIPs in the district, 34 are diversion weirs and 18 are reservoirs. The designed ayacut of the 52 MIPs is 15602 ha in Kharif and 2838 ha in Rabi. The certified ayacut of the above MIPs is 12770 ha in Kharif. Besides the minor irrigation projects, the district has 345 completed lift irrigation points creating irrigation potential to the tune of 6160 ha. Lack of irrigation facilities is the major constraint for development of agriculture in many parts of the district. Most of the bore wells in mining areas are defunct due to depletion of ground water level.

Although formation of *Pani Panchayat* is a good initiative Government, conflict among members has not been resolved and the problem of water requirement and management of resources to the desired extent still persists. So far 22 *Pani Panchayats* under MIPs and 205 under LIPs have been formed and most of these are registered. It has been planned to hand over the maintenance of all MIPs and lift irrigation points to *Pani Panchayat*. However, the goals set for *Pani Panchayats* is yet to be achieved due to lack of adequate managerial skill among the stakeholders. Therefore, efforts should be made to enhance the capacity of stakeholders to accomplish its goals and objectives of *Pani Panchayata*.

TRIBAL COMMUNITY OF ANGUL

According to the 2011 Census the tribal population in the district is 1,79,608 that accounts for 14.01 % percent of the total population in the district which is less than state average against 22.13% for the state. Out of total Scheduled Tribe population in the State, 94.52% reside in rural areas and 5.48% in urban areas. There are 62 tribal communities including 13 Primitive Tribal Groups [PTG] in the State. Orissa has the third largest concentration of tribal population in the country. Angul district is mainly dominated by Kandha, Gond, Sabar, Lodha, and Bhuyan. As per 2001 census, majority of the workers in tribal communities are agricultural labourers. Most of the cultivators among the Scheduled Tribes are marginal farmers, share croppers and small farmers. The literacy among the STs is 31.41% against overall literacy rate of 71.44% in the district as per 2001 Census. About 44.12% of the States geographical area is covered under Tribal Sub-plan which extends over 118 out of 314 Blocks in 12 districts and covers Scheduled Tribes (ST) population of 52, 68,646. Angul district is one of them; the district is mainly dominated by 26 Schedule tribes like Shabar,

Kond, Gond, Saora, Juang, Khairi, Munda, Kisan, Bhuiyan, Kora, Matya, Bhumij, Ho and Santal. The remaining tribal population inhabits MADA / Cluster pockets and is dispersed in other areas that are covered under the Dispersed Tribal Development Programme (DTDP). As per 2001 census, majority of the workers in tribal communities are agricultural labourer. Most of the cultivators among the Scheduled Tribes are marginal farmers, share croppers and small farmers. The literacy among the tribals in the district is 45.35 per cent against which the male and female literacy is 60.25 per cent and 30.05 per cent. Majority of the Schedule Tribes in the district live in hilly and forest areas, which are mostly inaccessible and isolated. Their economy is generally non-specialized. They are generally in a state of social, economic and educational backwardness. The tribal sub-plan strategy approach is a strategic policy initiative to secure overall development of the STs and to remove all socio-economic and educational disparities between them and the rest of the population. The Tribal Sub-plan [TSP] approach envisages integrated development of the tribal areas, wherein all programmes irrespective of their sources of funding operate in unison to achieve the common goal of bringing the tribal communities at par with the rest of the state and to improve the quality of life of the tribals. The original approach was oriented towards talking-up family oriented income generating schemes in the field of agriculture, horticulture, animal husbandry, elimination of exploitation, human resource development through education and training and infrastructure development programmes. This tribal development approach has now been re-oriented to cover employment-cum-income generation activities and development of infrastructure incidental thereof.

EMPLOYMENT AND LIVELIHOOD.

Employment and livelihood is directly linked to population growth, food security, education and health. It is expected that with increased levels of education and rising living standards, birth and mortality rates will decline in the coming years. But, the greatest challenge will be to expand opportunities for the growing labour force, to enrich their knowledge and skills through education, raise their living standards through gainful employment and make provisions for ensuring a good life for the aged. The district is leading the second highest in term of employment generation in the state.

Total unemployment in the district has been estimated to be mostly rural in nature which is expected to go up in the coming years. Population growth will take into account the significant level of underemployment and seasonal variations in the availability of work. It also reflects wide variations in the rate of unemployment among different age groups and different blocks of the district. Approximately three-fourth of the unemployed people are in rural areas majority of them are less educated. Small and medium enterprises [SMEs] seem one of the possibilities in this regard.

Suitable policies may be framed to attract greater private sector participation in terms of land development, production and processing

technologies, investment, management and marketing in a public private partnership [PPP] or public private community partnership [PPCP] approach. Identified high employment and livelihood potential sectors in the context of the district could be commercial ,agriculture, agro-industry & agri-business, retail and wholesale trade, housing, construction, garment industry, small scale and medium industries, education, health, transport / communications, community services etc.

Total population	:	1273821
Total worker	:	526520
Main worker	:	317547
Other worker		
Cultivator	:	107607
Agriculture worker	:	172414
Workers in household industry	:	35069
Other workers	:	211430

ANIMAL HUSBANDRY

Rearing of domestic animal is essentially required for the poor farmers to enhance their livelihood opportunities. Due to various reasons the growth of cattle population is not up to mark. Though animal husbandry is one of the oldest occupations known to mankind, scientific and commercial management of livestock is yet to be recognised as an option for livelihood. It is disappointing to note that the annual milk production of the district is only 35000 mt and meat production is 2075.30 mt i.e. per capita milk production is 36.21 kg and meat is only 1.82 kg. Production of egg is more disappointing as the per capita egg production in the district is only 12 per annum. As per 2007 livestock census, the cattle population of the district is 504084 out of which 476037 are of indigenous variety and 28047 are crossbreed. The Buffalo population is 20176 out of which only 149 are of improved variety. The sheep, goat, and pig population are 42249, 293389 and 5153 respectively. Similarly, the poultry population of the district is 233769. The sheep and goats found in Angul district are of local non-descriptive type. Mostly, sheep and goats are reared for the purpose of meat production. Animal husbandry is being encouraged under different anti-poverty programmes like SGSY.

FISHERIES

Fish is an important and traditional source of animal source of protein, vitamins and minerals. Angul is not self sufficient in fish production due to lack of knowledge and interest of the fish growers. They are yet to take pisciculture as

commercial venture. The annual fish production of the district is only 5416.23 MT and per capita fish production is only 4.75 kg. Water resources of Angul district comprises of tanks, ponds and reservoirs. The block wise details of ponds suitable for pisciculture are given in the following table. The district has six primary fisherman co-operative societies in order to manage big water bodies like MIP, reservoirs and large GP tanks etc. Government have formed Fish Farmers Development Agency (FFDA) in the district with the following objectives.

- Enhancing fish production and efficient management of existing resources
- Development of inland pisciculture
- Capacity building of fish farmers on modern pisciculture techniques
- Marketing of fish
- Supply input in a subsidized manner.

So far 2238.93 ha of area have been developed by FFDA, Angul through excavation of new tanks and renovation of old tanks. Government provides subsidy on fresh water seed hatchery at the rate of 10% with maximum ceiling of Rs.80, 000.00 in plain area and Rs.1, 20,000.00 in hilly areas to the fish entrepreneurs. The subsidy can also be available to individual entrepreneurs who have developed his own farm without the help of financing institutions. Recently, fresh water prawn culture has been introduced in the district. Prawn can be cultured along with other Indian Major Carp (*catla*, *rohu*, *mrigal*). This will support to fish farmers fetching a good return from fishery.

INDUSTRIES AND MINING

The industry sector takes a lead role for all-round development of a district. The major industries are the Mahanadi Coal Fields Ltd at Talcher, NALCO Smelter Plant at NALCO, Angul, NALCO Captive Power Plant, at NALCO, Angul, National Thermal Power Station (NTPC) at TTPS, Talcher etc. Similarly, there are as many as 205 MSMEs operating in the district.

Coal is the prime mineral resource of the district. The available coal is non-coking in nature but it is suitable for generation of thermal power. Availability of better-quality coal is relatively petite, those are having good demand by sponge iron plants, ferro alloys plants, refractory's, cement plants, paper mills, sugar mills, steel plants and many other industries. The inferior grade coal is mostly used in brick burning. As many as 12 workable coal seams of various thicknesses have been reported in Talcher. The basinal area of Talcher coal field is 1813 sq.km. The total geological reserve has been worked out to be about 36,868.12 mts up to a depth of 1200 m, which constitute about 18.7% of the country's total non-coking coal reserve. Out of this, mineable reserve would be in the region of 9,500 million tonnes. Besides coal, minerals like graphite, fire clay, precious stones are available in the district. Graphite occurs in villages of Dhandatopa, Taleipathar, Adeswar, Akharakata, Bhandarimunda, Girida, Sanrohilla, Lanchi, Govindpur etc of Athamalik sub-division having Fc from 7.46% to 44.4%. A detailed exploration needs to be carried out to prove the reserve and its economic viability.

Major Industries of the Angul District.

NALCO is a blue chip company in the aluminium sector. NALCO is the largest integrated bauxite-alumina-aluminium complex in Asia. Nalco's 4.60 lac tpa capacity aluminium smelter and its 1200 MW captive power plant are located in Angul. Nalco's smelter came online in 1984. NALCOP manufacturing plants and township called Nalco Nagar are located at 5 km (3.1 mi) from Angul town, by the side of NH-55. Nalco manufactures primary aluminium metal in the form of ingots, wire rods, sow moulds, billets and strips. Nalco aluminium is exported to 30 countries.

NTPC has two power plants in Angul district. NTPC/TTPS is located 7 km (4.3 mi) from Talcher on the way to Bhubaneswar (460 MW). NTPC/TSTPS, also known as NTPC Kaniha (3000 MW) is located at Kaniha, 60 km (37 mi) from Angul. The company has a township for its 1,500 employees. The beneficiary states from the power generation are Odisha, Bihar, Sikkim, Damodar Valley Corporation, West Bengal, Jharkhand and southern states. Coal for the power plant is sourced from the Talcher Coal Field and water for thermal power is taken from Samal Barrage Reservoir.

MCL : Mahanadi Coal Field Limited is located in Talcher, around 20 km (12 mi) from Angul. It is a unit of Coal India Limited, MCL was previously under SECL (South Eastern Coal Field). The major mines under MCL are the Ananta Colliery, Dera Colliery and Balanda Colliery.

FCI (the Fertilizer Corporation of India) has its unit in Talcher, Angul. One of the oldest industries of this area, FCI Talcher has faced problems in its viable operation and the plant has faced closure since 1998. The township and plants do exist, waiting for revival. RCF (Rashtriya Chemicals and Fertilizers) plans to revive the FCI plant in Talcher with a capital outlay of about ₹3,000 crore (US\$460 million).

HWP (the Heavy Water Plant) located in Talcher is a government of India organisation under the aegis of the Ministry of Atomic Power and Energy. The plant is involved in the production of organic solvents like TBP, D2EFHA, TAPO & TOPO, required as a part of the nuclear power program of the country.

TTPS (Talcher Thermal Power Station) was one of the oldest power generation plants of the government of Odisha, with a capacity of 460 MW . It is located in Talcher. Coal for the plant is sourced from the Talcher Coal Field and water for the thermal power is taken from nearby Brahmani river. The company was taken over by and run by NTPC since 1998.

JSPL (Jindal Steel and Power) is a major industry which has come up in Angul district with a capital investment of ₹20,000 crore (US\$3.1 billion) for setting a steel producing facility and a 1,500 MW power generation unit. JSPL plans to commission the first phase of its 6 million tonne per annum (MTPA) steel plant in Angul district by mid-2014. In the first phase, it will have a capacity of 1.8 MTPA.

BSSL (Bhushan Steel and Strips) is in the process of setting up a power plant and an advanced hot rolling plant on 1,618 acres (6.55 km²) at Angul, at a

cost of 5,200 crore (US\$800 million). It is in talks with the state government for the allotment of additional 3,500 acres (14 km²) to enable it to triple the planned capacity of 2.2 million tonnes (mt) in about five years. The Angul plant has already started producing 110 MW, sponge iron and billets production is close to 0.5 million tonnes.

EDUCATION

Education is the golden fibre of national as well as state development process, which increases vision and socio-economic status of human being. It is widely accepted as an instrument of social change and the best defence of a nation. Education is a major component of human development index (HDI). Angul faces various challenges of education at various levels namely, adult and continuing education, school education, higher and professional education, which are further bound by regional rural-urban and gender disparities. At the same time, the challenge is two-fold-that of numbers and of quality. Indeed, the challenge is meaningfully educating a one billion for strong nation on a continuing basis. Sociologists and Economists have always regarded education as one of the most significant factors affecting socio-economic outcomes. In 2011-12, the district has 1549 primary school where 121539 students enrolled their name in school and 3879 teachers appointed for teaching. Similarly, 703 upper primary school having 67836 students with 1556 teachers followed by 241 secondary school having 189375 students with 2158 teachers, 37 junior colleges and 20 degree colleges are operational in the district. Over the years, literacy rate has increased significantly in the district. The literacy status of the district is presented below.

Primary Education: There are 1637 Primary & Upper Primary Schools including SME/ TRW/Aided /Recognised/Un-recognised/Railway Deptt./Spl.Schools in Angul District.D.E.O are supervising the functioning of the primary education system in the district. The office of the Inspector of Schools is situated at Angul. Almost all habitations are covered with a RCC infrastructure for primary education.

High Schools & Colleges: There are 212 High Schools in this district out of which 112 are Government High Schools, 15 are aided Schools and 85 are recognized unaided schools. Apart from 15 Public schools in Angul and Talcher township area with big infrastructures there are 26 colleges are there in the district.

HEALTH

Inadequate healthcare facilities continue to pose a major challenge for the district administration. The district has 01 District Head Quarter Hospital (DHH) at Angul, 3 Sub-divisional hospitals at Talcher, Athamallik & Pallahara, 10 CHCs, 31 PHCs (new), 1 mobile health unit (MHU), 472 beds in hospitals, 16 Ayurvedic hospitals and dispensaries and 12 Homeopathic hospitals to cater to the health care needs of the people. Forests and hills occupy a considerable portion of the Angul district. The water of the rivers and wells is good for health. But the water

of the tanks is usually polluted through their unhygienic use. The climate is in general not salubrious and it contains tracts it is notoriously malaria prone substances. The district is having facilities of blood bank, ambulance and mobile health units. Besides these, corporate sectors like NALCO, MCL, NTPC and private institutions like Lions Club and Maruwari Juba Mancha have their own ambulance to meet the health care demand which indirectly augments the health care facilities available in the district.

The treatment and prevention of diseases, family welfare activities and other public health activities are managed by 3 different wings of health and family welfare department. They are the medical wing, the family welfare wing and the public health wing. Due to poor communication facilities and shortage of trained ANMs at the village level, women in rural areas are at great risk of child birth and pregnancy. The district with the help of NRHM initiatives is taking all steps to achieve 100% safe delivery and 100% complete immunization. The nutritional level of the children as well as that of the adult in rural areas is comparatively low. Communicable disease like malaria is a major cause of illness in the district. There are also major public health problems; other communicable diseases like leprosy and tuberculosis have its tolls. Seasonal diseases like cholera, dysentery and diarrhoea occur regularly in the backward rural areas of the district due to the unhygienic habits of the people and non-availability of safe drinking water.

Connectivity & Services

Transport and communication facilities are essentially required for rapid economic development and better living. Transport system comprises several modes including road, rail, waterways etc. and communication system includes post offices, courier services, wireless, electronic media etc. Out of total 103.51 km of railway route in the district, only 15.38 km is double line and rest 88.13 km is single line. Over the years, communication status of the district has improved significantly. The details of present status of communication facilities in the district are presented as under.

Table 16, Existing Road and Railway Connectivity of Angul District

Sl	Communication Facilities	Km / No
1	National Highway (Km)	257
2	State Highway (Km)	60.50
3	Major District Road (Km)	134.30
4	Other District Road (Km)	383.40
5	Rural Road (Km)	691.04
6	Forest Road (Km)	458.03
7	GP Road (Km)	56.70
8	PS Road (Km)	656
7	Railway Route (Km)	104
8	Railway Stations (No)	11

RAILWAYS

The Talcher-Sambalpur line of the East Coast Railway runs through the district. However with recent development in railway network Angul is now connected with important destinations of India like New Delhi, Mathura, Agra, Gwallior, Jhansi, Bilaspur, Howrah, Mumbai, Surat, Durg, Raipur, Amritsar, Ludhiana, Visakhapatnam. Daily train services from Angul is also available to Bhubaneswar, Puri, Cuttack, Sambalpur, Bolangir, Jharsuguda and Rourkela.

The coal transport through Railways have enhanced in a big way to other destinations of western part of the state and out side due to operation of this route.

Apart from Talcher and Angul, the other major Railway stations in the districts are Talcher Road, Budhapanka Junction, Talcher Thermal PH, Boinda, Jarpada, Handapa and Bamur etc.

AIRSTRIPE

One private airstrip namely "Savitri Jindal Airport" (IATA : IN0073 ILAO :VEAL) is the only of its kind in the district. It is belonging to Jindal Steel and Power Limited. This airstrip has a runway length of 5840 ft (1780 mtr) and has night landing facilities. Presently this airstrip is used by industrial houses for transportation through chartered planes/private owned planes.

RIVER SYSTEM

The river Mahanandi marks the Southern boundary of this district. River Brahmani enters the District through Rengali Reservoir and passes through Talcher Sub- division. Both these great rivers have number of tributaries of large and small in size and length. Pallahara, Talcher and, a major portion of Angul Sub-Division form a part of Brahmani basin. The basin of Mahanadi is spreading over Athamallik Sub-Division and part of Angul Sub-Division. Mahanadi and Brahmani are perennial rivers. A multi purpose dam has been constructed over Brahmani at Rengali. 250 MW of electricity is generated at Rengali hydro-power station. A barrage has also been constructed 35 Kms. down stream at a place called Samal. This irrigation project is poised to irrigate 3,36,400 Ha. of land in Angul, Dhenkanal, Cuttack, Jajpur and Keonjhar Districts. Other rivers of Angul are mountain streams, which are torrentous in the rains and in Summer contain little or no water. Their banks in the most part are high. Their beds are rocky and they are not used for the purpose of navigation.

MAHANADI

The Mahanadi has its origin near Sihawa in the Amarkantaka hills of Chhatisgarh. It is fed by important tributaries like Seonath Hadso, Jonk, Mand, Sone, Ib, Ong and Tela. About 8 Kms. West of Boudh and at Kiakata, it flows on the boundary of Athamallik Sub-Division of Angul and Boudh District. The river changes its course from SouthEast to South near Boudh town but after passing a few kilometres it again takes a South-Eastern course on rocky bed. After that it proceeds eastward in winding course an a few kilometres west of Tikarpara into Barmul gorge locally known as Satakosia Gonda. The Gorge is 22 Km. long and here the river winds round the wooded hills, 457 to 915 metre in height, crags and peaks of rare beauty overhang its course on both sides. Total length of Mahandi is 832 Kms. of which 77 Km. passes on south-west border of this district.

BRAHMANI

Koel and Sankha having their origin in Chhotanagpur region of Jharkhand and Chhatisgarh joined together at Panposh near Rourkela of Sundargarh District and downstream go by the name Brahmani. The meeting place of Sankha and Koel is regarded as a sacred place. River Brahmani enters Angul District through the Rengali Reservoir. It meets its four distributaries namely Samakoi, Tikira; Singrajhor and Nandira in Angul district. It provides water to almost all the mega industries of the district like Nalco, NTPC, MCL, FCIL, JSPL and JITPL. besides also supplying water to Talcher Municipality. All the pump houses of different industries are located at the downstream of Samal barrage/reservoir. It drains into Bay of Bengal after flowing through Jajpur and Kendrapara districts.

SANAKARANDI JORA

This rivulet forms the boundary of the districts of Angul and Sambalpur for a distance of 6 Kms. before it meets river Mahanadi near Hilei village of Kiakata Gram Panchayat. Rainwater of the Western fringe of the Athamallik is drained to the Mahanadi through this rivulet.

MANJOR RIVERS & STREAMS OF THE DISTRICT :

Several small hill streams that receive rain water from the northern part of Athamallik Sub-Division combine to form Manjor before it meets river Mahandi near village Belapunji under Kampala G.P. A Medium Irrigation Project has been constructed on this stream near village Manarbeda.

Table No :

Sl No	River Name	Detai Descriptions
01	Dandatopa Nalla	It rises from the hills near Solapada area of Athamallik Sub-Division. It flows into Mahanadi and becomes dry in summer. It drains water from the plateau of the Eastern part

		of Athamallik Sub-Division separating Hingmandal hill from the Panchadhara hills. It meets Mahanadi at Puleswar. High floodwater in this river during July 2001 caused extensive damage to the roads and nearby villages
02	Kuteswar Nalla	It has its origin in Panchadhara hill and it meets Mahanadi near Haridakotha village under Nagoan G.P. of Athamallik Block.
03	Chanagadi Nalla	This is a small mountain stream. It has its origin in Majhipada Reserve Forest of Angul Block. It flows through Jamudolli G.P. of Athamallik Block and meets Mahanadi near Karadasingha village.
04	Malia Jora	This is a small mountain stream having its origin in Kuru reserve forest. It meets Mahanandi near Tikarpada.
05	Mankara Nalla	It has its origin in Keonjhar district. It is joined by its chief tributary called Kakharua. It passes through Pabitrapur and Karadapal G.P.s of Pallahara Block and meets Rengali Reservoir near Debahali. It drains almost the whole of Pallahara Sub-Division and during rains it flows in spate.
06	Samakoi River	It has its origin in Keonjhar district. It passes through Jharabeda, Kunjam, and Rajadanga GPs of Pallahara Block and Burukina Biru and Parabil GPs of Kaniha Block. It is joined by large number of hill streams like Gaigaria nalla before it flows into Southern part of Pallahara Sub-Division and meets river Brahmani near village Gaham under Parabil G.P. of Kaniha Block.
07	Anuli River	Anuli originating in Athamallik Sub-Division meets Madelia nalla at Bhatapa and Luhurani nalla at Dangapal. The other tributaries of Anuli are small Nallas like Bagedia Nalla, Badajora Nalla in Chhendipada Block. It meets river Tikira at Sundarapal of Angul district. A diversion weir has been constructed across Anuli near village Kanloi.
08	Tikira River	Its total length is about 200 Kms. It rises from Rairakhol of Sambalpur District and after passing through Deogarh District enters Angul District at village Kerjang of Chhendipada Block. Small nallas like Kumbhira, Siarimalia and Pathuri meet Gauduni Nalla before Ghantianalli and it meets Tikra near Ghantianali. Tikra joins Brahmani near Rangabeda of Kaniha Block.

09	Singhida Jora (Wet lands)	Golasara nalla and Makamunda nalla having their origin in Kishorenagar Block joined each other at Hatianali of Chhendipada Block and downstream go by the name Singada Jora. It flows through Balipata, Kuskila, Barapada, Kosala, Raijharan, Kankarei G.Ps of Chhendipada Block, Kumuda, Gopalprasad G.Ps of Talcher Block, Santribida, Hariharapur of Kaniha Block and meets Brahmani near Balangi village of Kaniha Block. It's tributaries are small Nallas like Telikori, Kusumajori, Ghumudia and Bagadia Nalla. Bagedia nalla meets Ghurudi nalla at Kankarei and meets Singhida jora at Kusumupal of Talcher Block.
10	Nadira river	Two nallas Mutukuria and Nandira joined together and formed the river Nandira. Nandira meets Brahmani at Dasanali under Talcher Block.
11	Lingara or Nigra Nalla	It takes its rise in the hills which form the boundary of Athamallik and Angul Sub-Division and joins Brahmani at Khadagprasad near Meramandali Railway Station of Dhenkanal district. The town of Angul is situated on its left bank. It has many tributaries like Baulli (48 Kms.), Matelia (40 Kms.) and Matala (24 Kms.). Baulli takes its rise in the Labangi hills and meets Lingra at Rankasinga. The Matelia rises in the Krishnachakra Garha hills and after flowing past Purunagarha falls into the Lingara near Paratara. The Matala takes its rise in Hindol area and flows through Talmul and falls into Lingara near Similichhuin.
12	Deuljhari Hot Springs	Deuljhari is the ancient citadel of Saivism and is famous for the presence of hot springs. As per the legend there are 84 hot springs. But many of them have been overshadowed in the screw pine forest. Now twenty four springs are alive. Among these the springs bearing the name like Agnikunda, Taptakunda, Himakunda, Amrutakunda and Labakusakunda are prominent. The temperature of water in these springs varies from 40 to 62 degree celcius. It is believed that skin diseases are cured in bathing in the hot water springs. Deuljhari is at a distance of 235 kms from Bhubaneswar, 85 kms from Angul and 40 kms from NH-55 connecting at Boinda. The nearest railway station is at Boinda.
13	Khuludi (Malaygiri)	Malyagiri range of Pallahara Sub-Division houses a glittering waterfall near the village Khuludi. The fall making its spectacular jump from the hill top and paying homage to

		Lord Siva is located at a distance of 120 kms. from Angul and 20 kms. from Pallahara.
14	Mahala Saura Lake or Second Chilika of State	Boating in the cold water of the lake is always enchanting as well refreshing a beautiful experience of life. Malua Sarua lake of the Pallahara block of the Angul district is one of the beautiful natural place in the district as well in the state too. Migratory birds from different countries visited this place in winter seasons, people who used to come this place in winter get an opportunity of fishing of fresh fish, Its comes under the Pallalahara block of Angul district,

Sanctuary & Reserve Forest

Satkosia Gorge



Satkosia Gorge Sanctuary represents one of the unique gorge ecosystems in India. The forests mostly conform to deciduous type. It is the meeting point of two biotic provinces viz. Chhotanagpur plateau and Eastern ghats; thus representing magnificent floristic compositions-floral and faunal diversity. It is the Southern most natural gharial habitat in India. It has tremendous economic value in terms of spawning ground for prawns and variety of fish. Similarly Malyagiri hills represent semi evergreen to moist deciduous forest with innumerable plants of great medicinal value besides a host of wild animals.

WATERWAYS

The river Mahanadi & Brahmani are the main waterways of the district. The Mahanadi is navigable for a period of 7 months from September to March for 77 kms. from village Daruha in Athamallik sub-division to village Kataranga in Angul sub-division. The important ferry ghats of river Mahanadi are Puleswar, Kudagoan, Olath, Bahali, Lunahandi, Deuli, Kiakata etc.

The important ferry ghats of river Brahmani are Talcher, Durgapur, Karnapal, Talapada, Burukuna, Bijigole, Karadei, Rengali etc. Inland Waterway Authority of India has declared NW5 consisting of stretches from Talcher to Dhamra on the Brahmani river a distance of 265 Km. Barrages will be constructed for navigational locks allowing to maintain a minimum draft for passage of 500 tonne vessels at a time.

FERRY SYSTEM

As per existence of river system in the district the Ferry Ghats are not in much demand during the fair weather and dry season. However during rainy season people require to cross the river, nallah and joras with the help small country boats. Apart from the ferry ghats in river Mahanadi and Brahmani, people of Athamallik locality use country boat to cross river Mahanadi near Binikei Ghat. As per revised guidelines of the Government, the ferry ghats are being auctioned by Gram Panchayat.

POSTAL SERVICES

The history of the postal services of the district is not very old. The development of postal services had started only after independence. Infact the Puri of Post and Telegraph Department was created by bifurcating the Cuttack division in the year 1955. This division was delivering postal services to Puri and Dhenkanal district in which Angul was a part. After the speedy industrialisation in un-divided Dhenkanal district, the postal services were required in a big scale and new post offices were opened in Angul zone at a faster rate. Beginning of the Coal Mining, instalization of Fertilizer Plant and Thermal Power Plant at Talcher, establishment of Smelter and CPP unit of NALCO were some of the important reasons for augmentation of postal services in the district.

There are 239 nos. of Post Offices in district with its Head Office at Angul. The district has 01 Head Post Office, 30 nos. (07 Urban + 23 Rural) Sub-Post Offices and 208 nos. Branch Post Offices.

Apart from the normal postal services like letter despatch, money order etc. most of the post offices located at urban areas transact a good business with postal small savings schemes, Kisan Vikas Patra, NSS, Speed Post, Public Provident fund, Postal Life Insurance and Senior Citizen savings scheme.

In earlier times, pigeons were used for sending messages on paper tied to legs mostly by police. A pigeon loft is maintained at Police Training Centre (PTC),

Angul though at present pigeons are not used for sending and receiving messages.

Telecommunication in Angul District:

There are 35 Telephone Exchanges in Angul district connecting 27,917 subscribers. Besides, WLL (Wire less in local loop) service is available from Nalconagar, Kosala, Boinda, Kaniha & Khamar exchanges. BSNL with its customer base of 102.3 million is one of the largest & leading public sector units providing comprehensive range of telecom services in India. Accordingly BSNL also have a sound net work to provide telecom services to the customers of Angul district. The main telephone exchanges of the district are located near the Government Bus stand, Angul. BSNL has other important auto-telephone exchanges at Nalco Nagar and Talcher. Other than services through land line phone, cell phones, WLL facilities are also available in the rural area of the district. Recent development in communication engineering have now been extended to avail facilities using broadband, e-mail and other social net-working system which is provided by BSNL to the customers of Angul district.

The total number of landline connections is 12212 in Angul Telecom District. Cell one connection (Mobile) are variable in number and does not have a fixed number to mention due to extreme variation and frequent change in operating agencies amongst the users.

BSNL is also providing its advanced facilities to use 2G services across the district covering almost all the blocks. However the most advanced form of communication service 3G is confined to urban areas like Angul, Talcher, Banarpal and Kaniha.

Radio and Wireless System and Stations

Presently there is no radio station available in Angul. However wireleses radio system for communication is widely used by State Police, Central Paramilitary Forces, Forest and Indistrial houses.

TV Stations and Services

Doordarshan has Low Power Transmitters (LPT) for DD 1 Channel at Angul, Athamallik, Durgapur, Pallahara, Talcher and Nakchi. Mostly the households have been connected with set top boxes for digital terrestrial television and the use of cable television is getting reduced.

TOURISM ART & CULTURE

A number of places in the district are bestowed with natural beauty, historical importance, and of cultural and religious importance. These include Satkoshia gorge with its crocodiles and other wildlife reserve, sleeping image of Lord Vishnu at Bhimkand, the temple of goddess Hingula at Gopalprasad, pre-historic sites at Kaliakata, etc. Besides this, *Ravanchhaya*, the traditional puppetry of Palalahara is unique in the district as well as in Odisha.

HOUSING

Housing is one of the three most essential and basic needs, the other two being food and clothing. As an outcome of unequal development and distribution of income, assets and resources, there is some new slums are developed in and around all major towns' urban areas Angul. In rural areas, people residing in Kutch/tile sheds live adjacent to cattle sheds. As per 2001 Census there were a total of 297050 out of that 249733 Rural household and 47317 urban household

Electrification (Power Sector)

Angul is a major power producing district in the state with the thermal power plant at Kaniha. However, a number of villages still lack electrification. Even the progress of Rajiv Gandhi Grameen Vidyutikaran Yojna is not satisfactory. In regard to village electrification, the position of the district is marginally higher with 94.5 percent inhabited villages are electrified as compared to the state average of 82.8 percent. Moreover, the state's first solar rural electrification system has been inaugurated recently at Tentulikhol and Udal villages of the Kishorenagar block of Angul district.

OCCUPATION

Majority of the people in Angul district depend on agriculture. The proportion of main workers to the total workers is 65.93 percent, which is less than the state average of 67.17 percent. On the other hand, work participation rate is slightly higher than the state average. Proportion of cultivators to the total workers is 22.16 percent in the district. Agricultural laborers constitute 10.19 percent of the total workers in the district. The entrepreneurship of the people in agriculture/horticulture, particularly in Blocks like Chhendipada, is remarkable; and the work participation rate is higher than the state average. Mining & industrialization in few parts of the district have significantly influenced the traditional occupation of the local population partly because of direct or indirect employment opportunities in these projects and partly because of the loss of agricultural land through land acquisition by the government.

MIGRATION, DISPLACEMENT AND REHABILITATION

The movement of population within the district or from one district to another district or beyond the state is generally necessitated by economic condition and social ties. Much of the population resides in the rural areas where agriculture

forms the main stay of the economy. It is marred by poor irrigation facilities. As such, lack of employment opportunity on land, and the growth of population has made large scale migration to urban areas inevitable and continues unabated. Once a member in a family is educated upto H.S.C. level he tends to shun all physical labour and gives up learning the traditional occupation of the family and goes in search of jobs. Majority of the migration comes from OBC category. This is followed by the SC community. The average of migrants falls in the age group of 18 – 25 years of age. Lack of literacy is a persistent issue for migrants. Migration to other States and Districts is found from Kishorenagar, Athamallik and Pallahara blocks. The migrants from outside the states hail from Punjab, Hariyana, Bihar, Andhra Pradesh, Chhatisgarh, Jharkhand, Tamilnadu and Delhi. They work in different plants established by JSPL, JITPL, Bhusan Steel, MONNET. They also work in different coal mines under the control of MCL. Some migrants also worked in NALCO, NTPC/TTPS and Heavy Water plant.

FOOD SECURITY

To provide food security and ensuring availability of essential commodities at Govt. price to all section of the society, particularly to the poorer of the poors, backward classes, destitute, old and incapable person.

P.D.S.:

To make available all essential commodities at subsidized rate to all the identified consumers of the society with an aim to ensure food security to all and to create a hunger free nation through public distribution system.

CONSUMER WELFARE:

The scheme aim at awaring and educating consumers in various ways and means to protect them from harassment of unscrupulous traders, businessmen, manufacturers and service providers.

SOCIAL SECURITY

District social welfare wing dealing with various schemes to provide social security to old age persons, widow persons, cured leprosy patient, disabled persons, detected HIV positive persons, families in lose of prime bread earner & in protection of destitute women as well as orphan children.

Further to increase the attendance of the children in schools and supplementing their nutritional intake, both the students of Primary, Upper Primary & High school (from class VI to VIII) are being covered under MDM programme in this district, Sustainability of this programme in terms of 100%coverage of school children is a must to achieve the goal of the programme.

This wing also dealing with ICDS scheme to provide services such as immunization, Pre-School education, Supplementary nutrition, Referral services, Health Nutrition Education and Health check-up for the development of rural children 0-6 years of age and Pregnant/Nursing mothers along with all women in the age group of 18 - 45 year of age. This scheme is also looking for the development of adolescent girls who are the future mother of the society. In addition to the above the overall empowerment of women is being looked after through implementation of Mission Shakti Programme.

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

HUMAN DEVELOPMENT INDICATOR:

The Human Development Index (HDI) of Angul is 0.663 which is higher than the state average of 0.579. Similarly, the income index is also significantly higher i.e. 0.748 for Angul as against the state average of 0.545. In case of Reproductive Health Index, Angul had 35.76 percent of women married below 18 years as against the state average of 40 percent. Sex ratio is lower than the state average, but literacy rate is comparatively higher for women in the district (HDR, Orissa, 2004). The participation rate of women in the total workforce of the district is slightly higher 32.48 percent than the state average 31.54 percent. Role of the women in agricultural activities and NTFP is also very significant. The overall position thus seems to be quite optimistic as building public awareness, social motivation, special schemes and provisions for women and girl child would help women to be in a more favourable position by 2020.

Table 29.
Health, Income, Education And Human Development Index of Angul District

District	Health Index	Income Index	Education Index	HDI Value	HDI Rank
Angul	0.481	0.748	0.760	0.663	6
Odisha	0.468	0.545	0.723	0.579	7

Source: State Human Development Report, Odisha, 2004 (p: 194)

CRITICAL INFRASTRUCTURE

Anganwadi centers

An AWC is the focal point for delivering ICDS services upto 40 children during day time. Apart from this a village AWC is centre for delivering various health, nutrition services to the Adolescent girls, Pregnant & lactating mothers. In order to discharge the functions effectively, the AWCs should require basic infrastructure. At present there are 32% of AWC have no own Anganwadi Buildings. Some of the buildings are also dilapidated conditions and not having basic facilities.

Schools and other Educational Institutions-In 2011-12, the district has 1549 primary school where 121539 students enrolled their name in school and 3879 teachers appointed for teaching. Similarly, 703 upper primary school having 67836 students with 1556 teachers followed by 241 secondary school having 189375 students with 2158 teachers, 37 junior colleges and 20 degree colleges are operational in the district.

Hospitals and Health Centres

Inadequate healthcare facilities continue to pose a major challenge for the district administration. The district has 01 District Head Quarter Hospital (DHH) at Angul, 3 Sub-divisional hospitals at Talcher, Athamallik & Pallahara, 10 CHCs, 31 PHCs (new), 1 mobile health unit (MHU), 472 beds in hospitals, 16 Ayurvedic hospitals and dispensaries and 12 Homeopathic hospitals to cater to the health care needs of the people. Forests and hills occupy a considerable portion of the Angul district. The water of the rivers and wells is good for health. But the water of the tanks is usually polluted through their unhygienic use. The climate is in general not salubrious and it contains tracts it is notoriously malaria prone substances. The district is having facilities of blood bank, ambulance and mobile health units. Besides these, corporate sectors like NALCO, MCL, NTPC and private institutions like Lions Club and Maruwari Juba Mancha have their own ambulance to meet the health care demand which indirectly augments the health care facilities available in the district.

Veterinary Hospitals

Animal resources are important in an agrarian economy as they supplement farmers' income and provide non-farm employment to the poor. In Angul more than four-fifths of rural households own some livestock and dairy farming is practiced in general. There are only 16 veterinary hospitals including one or two veterinary dispensaries in a block. There are 17 veterinary doctors and 78 livestock aid centers having 55 nos livestock inspectors.

Refer Vol 2

Police and Fire Stations

Police & fire stations provide security to the people during emergencies. To provide quick delivery of services the district has been divided into 23 police stations having 672 police persons including officers and field staffs similarly there are 8 fire services viz. In all block head quarter and Subdivisional head quarters have 8 fire stations in operation having 126 fire personals.

Refer Vol 2

Banks and Post Offices

Banking institutions are the most important trusted financial institutions of people. There are more than 162 bank branches in the district. Similarly There are 239 nos. of Post Offices in district with its Head Office at Angul. The district has 01 Head Post Office, 30 nos. (07 Urban + 23 Rural) Sub-Post Offices and 208 nos. Branch Post Offices.

Apart from the normal postal services like letter despatch, money order etc. most of the post offices located at urban areas transact a good business with postal small savings schemes, Kisan Vikas Patra, NSS, Speed Post, Public Provident fund, Postal Life Insurance and Senior Citizen savings scheme.

In earlier times, pigeons were used for sending messages on paper tied to legs mostly by police. A pigeon loft is maintained at Police Training Centre (PTC), Angul though at present pigeons are not used for sending and receiving messages.

Road and Railway network

The Talcher-Sambalpur line of the East Coast Railway runs through the district. However with recent development in railway network Angul is now connected with important destinations of India like New Delhi, Mathura, Agra, Gwallior, Jhansi, Bilaspur, Howrah, Mumbai, Surat, Durg, Raipur, Amritsar, Ludhiana, Visakhapatnam. Daily train services from Angul is also available to Bhubaneswar, Puri, Cuttack, Sambalpur, Bolangir, Jharsuguda and Rourkela. The coal transport through Railways have enhanced in a big way to other destinations of western part of the state and out side due to operation of this route. Apart from Talcher and Angul, the other major Railway stations in the districts are Talcher Road, Budhapanka Junction, Talcher Thermal PH, Boinda, Jarpada, Handapa and Bamur Transport and communication facilities are essentially required for rapid economic development and better living. Transport system comprises several modes including road, rail, waterways etc. and communication system includes post offices, courier services, wireless, electronic media etc. Out of total 103.51 km of railway route in the district, only 15.38 km is double line and rest

88.13 km is single line. Over the years, communication status of the district has improved significantly. The details of present status of communication facilities in the district are presented etc.

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

DRINKING WATER SOURCES IN RURAL AREA:

Name of the Block	Total			Tube Well	
	Tube Well	Sanitary Well	Pipe water	Functional	Defunct
Angul	2016	77	35	2001	15
Athamallick	1622	42	17	1598	24
Banarpal	1655	9	24	1644	11
Chhendipada	1543	104	38	1537	06
Kaniha	2712	12	35	1708	4
Kishorenagar	1469	36	22	1441	28
Pallahara	1739	57	31	1739	0
Talcher	1192	3	24	1186	06
Total	12948	340	226	12854	94

Drinking Water Supply in Urban Area:

Mostly parts of the urban area habitations are covered with supply water facilities.

Name of the Urban Body	Water Points	Functional	Defunct
Angul Municipality	305	300	05
Athmallik NAC	149	145	04
Talcher Municipality	104	104	-

Minor Irrigation Projects:

Name of the Blocks	Numbers	Particulars of area in Hect.
Angul	11	3513
Atthamallik	16	2293

Banarpal	01	142
Chhendipada	09	5883
Kaniha	04	806
Kishorenagar	08	2925
Pallahara	07	4343
Talcher	02	242
Total	58	20147

Irrigation Project/ Dam Details

Srial No	Dame Name	Location	Location	Type of Dam	Ayucut areas
01	ManJore	Madhopur, Athammlick			
02	Derjanga	Angul	Village, Benagadia Block - Banarpal Angul	Medium	7392 Ha in 3 blocks
03	Rengali Dam / Brahamini	Samal			

INFRASTRUCTURE:

Sl . N o.	Name of the Block	PDS Outlets	Post Offices	CH C	PH C	Dispensary	Educational Institutions				Livestock centers	Major Industries	Godown
							UP	M E	Hig h	Coll ege			
1	Angul	122	38	1	5	4	153	48	19	1	12	Nalco	01
2	Athamallik	119	23	1	3	4	176	40	22	3	7	01	2
3	Banarpal	142	32	1	4	2	117	34	22	3	12	Bhusan/ Nalco	01
4	Chhendipada	118	33	2	4	4	155	40	25	3	12	Jindal/ Monet	--
5	Kaniha	107	27	1	4	3	15	40	24	4	6	NTPC	01

							8						
6	Kishore nagar	115	20	1	3	3	74	10 2	22	3	8	01	6
7	Pallahar a	137	25	1	5	6	19 2	49	23	2	8	Gita Spong e	01
8	Talcher	71	29	1	3	1	11 2	32	23	5	13	TTPS	01
URBAN													
1	Angul (M)	41	5	14	6	7	3	4	1				
2	Athamali k NAC	11	1	2	1	2	4	2					
3	Talcher Municipality	54	4	17	2	5	1	9	3				

Major industries of the District are as follows : --

Serial No	Industries name	Registration
01	M/s Smelter Plant of NALCO Ltd., At/P.O. Nalco Nagar, Dist- Angul.	AN-52
02	M/s CPP of NALCO Ltd., At/P.O. Nalco Nagar, Dist- Angul.	AN-53
03	M/s Amritesh Industries (P) Ltd., At- Industrial Estate, Angul, P.O. & Dist- Angul.	AN-57
04	M/s Bharat Electrical Accessories (P) Ltd., At- Industrial Estate, Angul, P.O. & Dist- Angul.	AN-58
05	M/s Sakuntala Aluminium Industries (P) Ltd., At- Industrial Estate, P.O. & Dist- Angul.	AN-59
06	M/s Jagannath Saw Mill, At-Panchamahala, P.O. & Dist- Angul.	AN-60
07	M/s Shree Balajee Industries, At/P.O.-Karadagadia, Dist- Angul.	AN-68
08	M/s Shree Sheelgar Food Products, At- Industrial Estate P.O. & Dist- Angul.	AN-69
09	M/s INDFAB, At- FCI Road, P.O. Nalco Nagar, Dist- Angul	AN-71

10	M/s Popular Tyre Retraders, At/P.O.Karadagadia,Dist-Angul.	AN-73
11	M/s Maa Budhi Metal Industries, At- Industrial Estate, P.O. & Dist- Angul.	AN-74
12	M/s Krishna Paddy & Food Products (P) Ltd.,At-Mandiapasi, P.O. Rantalei,Dist- Angul.	AN-75
13	M/s Appollo Stone Crusher,At/P.O. Thakurgarh, Dist- Angul	AN-76
14	M/s Laxmi Chemicals, At- Industrial Estate, P.O. & Dist-Angul.	AN-77
15	M/s Maa Tarini Stone Crusher, At/P.O. Kumurisingha, Dist-Angul.	AN-79
16	M/s Tara Stone Crusher, At/P.O. Rantalei, Dist- Angul.	AN-80
17	M/s Saralia Foods (P) Ltd., At- Benagadia, P.O. Jarasingha, Dist-Angul.	AN-81
18	M/s Sri Jagannath Stone Crusher, At/P.O. Natada, Dist-Angul.	AN-83
19	M/s Vijaya Stone Crusher, At/P.O. Bhubanpur, Dist- Angul.	AN-84
20	M/s M.S. Stone Crusher, At- Girang,P.O. Kulad, Dist-Angul,	AN-90
21	M/s Sree Metaliks Ltd., At- Mukundapur, P.O. Paranga, Dist Angul	AN-91
22	M/s Krishna Oil Mill., At/P.O. Hemsurapada, Dist- Angul.	AN-94
23	M/s Krishna Fly Ash Bricks, AT/P.O. Giranga, Dist- Angul.	AN-95
24	M/s Swami Narayan Retreads, At- Panchamahala, P.O. Karadagadia, Dist- Angul.	AN-97
25	M/s Ganesh Sponge (P) Ltd., At/P.O. Krushnachandrapur, Dist- Angul.	AN-98
26	M/s Sai Hitech Rice Industry, At- Maratira, P.O. Tubey, Dist- Angul.	AN-99
27	M/s Tarini Pitch & Chemicals (P) Ltd.,At- Mukundapur, P.O. Paranga, Dist- Angul.	AN-100

28	M/s Patnaik Stone Crusher, At/P.O. Talamula, Dist- Angul.	AN-102
29	M/s Jay Jagannath Castings (P) Ltd.,At/P.O. Jarpada, Dist-Angul.	AN-103
30	M/s Baba Gangaram Food Products (P) Ltd.,At-Mukundapur, P.O. Paranga, Dist- Angul	AN-104
31	M/s Galaxy Oxygen (P) Ltd., At- Mandiapasi, P.O. Rantalei, Dist- Angul.	AN-105
32	M/s Fly Ash Brick Plant of Jindal Steel & Power Ltd., At-Mahitala, P.O. Natada, Dist- Angul.	AN-108
33	M/s Eastern Aluminium, At- Industrial Estate, P.O.& Dist-Angul.	AN-110
34	M/s Rukmani Infra Projects (P) Ltd., At- Maratira, P.O. Tubey, Dist- Angul.	AN-112
35	M/s Bhushan Energy Ltd., At- Ganthagadia, P.O. Nuahata, Dist- Angul.	AN-116
36	M/s Jindal Steel & Power Ltd., At- Nisha, P.O. Jindal Nagar, Dist- Angul.	AN-117
37	M/s Suman Bakery Products, At- Panchamahala, P.o. Karadagadia, Dist- Angul	AN-118
38	M/s Jagannath Crackers (P) Ltd.,At/P.O. Bhubanpur, Dist-Angul.	AN-119
39	M/s Solar Air Products (P) Ltd.,At/P.O. Paranga,Dist-Angul.	AN-121
40	M/s Monnet Ispat & Energy Ltd.,At/P.O. Malibrahamani, Dist- Angul.	AN-123
41	M/s Lakshmi Udyog, At- S-2/2, Industrial Estate, P.O. & Dist- Angul.	AN-126
42	M/s Tulshi Rice Tech. At- Santri, P.O. Banarpal, Dist-Angul.	AN-127
43	M/s Shanti Bakeri, At- Industrial Estate, P.O. & Dist- Angul.	AN-128
44	M/s Maa Maheswari Rice Mill, At- Ranjana, P.O. Madhapur, Dist- Angul.	AN-129
45	M/s Suraj Iron, At- Panchamahala, P.O. Karadagadia, Dist-	AN-131

	Angul.	
46	M/s Maa Budhi Metal Industries, At- Shed No.35, Industrial Estate, P.O. & Dist- Angul.	AN-132
47	M/s Odyssey Motors Ltd., At- Kulad, P.O. Nalco Nagar, Dist- Angul.	AN-133
48	M/s Lakshmi Uma Laghu Udyog (P) Ltd., At- Malisahi, P.O. Panchamahala, Dist-Angul.	AN-134
49	M/s Maa Bhairabi Industries LLP, At- Mukundapur, P.O. Paranga, Dist- Angul.	AN-135
50	M/s OMFED Angul Dairy,At- Panchamahala, P.O. Karadagadia, Dist- Angul.	AN-136
51	M/s B.G. Plast, At- Mukundapur, P.O. Paranga, Dist- Angul.	AN-137
52	M/s Nidhivan Biz Corp.LLP, At- Nuagon Road, P.O. Sabalbhangha, Dist- Angul.	AN-138
53	M/s Shree Sai Udyog, At/P.O. Kangula Dist- Angul.	AN-139
01	The Talcher Carpenters Indl.C.S.Ltd., At/P.O. Talcher,Dist- Angul.	AN-22
02	M/s TTPS(NTPC Ltd.), At/P.O. Talcher Thermal,Dist- Angul.	AN-31
03	M/s The F.C.I. Ltd., Talcher Unit, At/P.o. Vikrampur, Dist- Angul,	AN-34
04	M/s Orichem Ltd., At- South Balanda, P.O. Talcher, Dist- Angul.	AN-42
05	M/s Rourkela Const. (P) Ltd.,At- I.E., South Balanda, P.O. Talcher, Dist- Angul.	AN-45
06	M/s Mohanty Tar Refineries (P) Ltd., At/P.O. Talcher, Dist- Angul.	AN-54
07	M/s Rengali Power Station, At/P.o. Rengali, Dist- Angul.	AN-56
08	M/s TSTPS(NTPC Ltd.), At- Deepasekha, P.O. Kaniha, Dist- Angul.	AN-62
09	M/s Indian Oil Corporation Ltd.,(IBP)Divn. At-213, Koyal	AN-63

	Nagar, P.o. Balanda, Dist- Angul.	
10	M/s Indo Gulf Industries Ltd.,At-I.E.Balanda, P.O. Balanda,Dist- Angul.	AN-64
11	M/s Central Workshop (Exv.), At/P.O. Balanda, Dist- Angul.	AN-65
12	M/s Indian Explosives Ltd.,At- I.E., Balanda, P.O. Balanda,Dist- Angul.	AN-66
13	M/s IDL Explosives Ltd., At- Plot No. 13 & 14, I.E., P.O. Balanda, Dist- Angul.	AN-70
14	M/s Aryan Energy (P) Ltd., At/P.O. Balanda, Dist- Angul.	AN-86
15	M/s Global Coal & Mining Ltd.,At- I.E. Balanda, P.O. Balanda, Dist- Angul	AN-87
16	M/s Navabharat Fuse Co. Ltd., At- I.E. Balanda, P.o. Balanda, Dist- Angul	AN-88
17	M/s Indian Oil Corporation Ltd., At- I.E., Balanda, P.O. Balanda, Dist-Angul.	AN-89
18	M/s Bindal Sponge Industries Ltd., At- Sunakhani, P.O. Ekagharia, Dist- Angul.	AN-96
19	M/s Ash Brick Plant of TTPS, At/P.o. Talcher Thermal, Dist- Angul.	AN-101
20	M/s Spectrum Coal and Power Ltd.,MCL, At/P.O. Danra, Dist-Angul,	AN-107
21	M/s Orissa Power Consortium Ltd.,At-C,2, Samal Barage Township, P.O. Samal, Dist Angul.	AN-109
22	M/s Jalan Carbons & Chemicals (P) Ltd., At/P.O. Ekagharia, Dist- Angul.	AN-111
23	M/s S.N. Oxygen (P) Ltd.,At- Tambur, P.O. Baadasara, Dist- Angul.	AN-113
24	M/s Utkal Energy Resources Ltd., At/P.O. Kankili, Dist- Angul. Tahasil/Block-Talcher	AN-114
25	M/s Nityan Rice Mill, At-Gurujanguli,P.O. Chainpal, Dist- Angul.	AN-115
26	M/s K.R. Enterprises, At- Hill Top College Road, P.O.	AN-122

	Talcher, Dist- Angul.	
27	M/s Jindal India Thermal Power Ltd.,At/P.O. Derang, Dist- Angul	AN-124
28	M/s Solar Industries India Ltd., At- Ghantapada I.E., P.O. Talcher, Dist- Angul.	AN-125
29	M/s TSTPS(NTPC Ltd.,)Solar Plant, At- Kaniha, P.O. Deepshikha, Dist- Angul.	AN-130

CHAPTER -3

HAZARD, VULNERABILITY & RISK ASSESSMENT



Introduction : Hazard, Vulnerability, Risk & Capacity analysis (HVRC) is the most important part of the plan as the entire planning process will be based on its outcome. Any error in identifying the frequency, magnitude and projected impact leads to incorrect identification of major hazard and hence an imperfect plan. The necessary outcomes of the HVRC analysis will be the type of hazards that the district is prone to, history of hazards, impact analysis of the worst case, the area, people and infrastructure that is prone to the risk of these hazards and their vulnerability of being damaged by such disasters due to their vulnerability characteristics. Vulnerability Assessment should deal with the natural, socio-economic vulnerability, housing vulnerability and the environmental vulnerability. The vulnerability atlas has been referred for this purpose. After knowing the existing hazards and potential vulnerabilities, the risk analysis will be carried out. HVRC analysis will also include resource inventory/capacity analysis, preparedness analysis in terms of network of communication systems, public distribution systems, storage facilities, transportation facilities, medical facilities, fire stations, cyclone shelters with their capacity, presence of NGOs and other volunteers etc so as to enable quick response.

1. EARTHQUAKE

Angul District comes under Zone-III (Moderate Damage Risk Zone) Although, Angul district comes under earthquake Zone – III , no severe earthquake has occurred. While earthquakes cannot be predicted, a detailed mapping of seismic fault systems and seismic source regions, quantification of probability of experiencing various strengths of ground motion at a site in terms of return period for intensity will be carried out and appropriate regulations put in place to decrease the vulnerability of built environment.

Different types of ground do shake with different severity in an earthquake. Softer soils and those with high water content generally shake more than rocky sites. Wherever possible site structures on firmer ground. Most of the area of the district is rocky and mines this will reduce the severity of vibrations experienced in an earthquake. Capital intensive infrastructure, hazardous facilities and materials, and other important buildings should not be located in the vicinity of a known fault. Since early warning is not possible in case of earthquakes, the best choice is to ensure that seismicity is monitored and integrated with the GIS. Angul District's situation indicates that some parts of the District like

Talcher, Chhendipada, Athhamallick, Angul, Banrapal have been going to provided with the seismic instrumentation. It is necessary that mitigation strategy considers instrumentation of all other areas in order to have a total assessment of the seismic activity. This would enable reconfirmation and up gradation of micro zonation activities.

2. FLOOD

River flooding is a regular hazard faced by the District. All the major river systems in the District are vulnerable to flooding, as captured in the Vulnerability Atlas. The urban and rural areas like Angul, Athamallick, Pallahda, Kanhia, Samal, are facing flooding primarily due to drainage and increased run-off loads in hard surfaces.

REGULATIONS WOULD INCLUDE.

- Not permitting unrestricted new development in the hazard prone areas
 - Anchoring and flood proofing structures to be built in known flood prone areas
 - Built-in safe guards for new water and sewage systems and utility lines from flooding
 - Enforcing risk zone, base flood elevation, and flood way requirements
 - Prohibition on development in wetlands
 - Prescribing standards for different flood zones on flood maps.
- To meet these requirements, local governments will have to adopt specific flood plan Management into zoning and subdivision regulations, housing and building codes, and resource protection regulations.
- In low-lying areas, close to the coast, and on flat land in river valleys, there may be a potential for coastal or river flooding. In geologically younger river valleys, in mountains, and foothills there may be a potential for flash-flooding.

It is important to check the history of flooding in the area. Wherever possible

- Map the extent of land covered by past flood waters
- Get an indication of the depth of past flood waters
- Find out about the severity of past floods; how much damage they have caused, how fast they flowed and how much debris they left behind and
- Find out how often flooding has happened, over at least the past 20 years.

3. CYCLONE

In meteorology, a cyclone is an area of closed, circular fluid motion rotating in the same direction as the Earth. This is usually characterized by inward spiralling winds that rotate counter clockwise and clockwise of the Earth. Most large-scale cyclonic circulations are centred on areas of low atmospheric pressure. The largest low-pressure systems are cold-core polar cyclones and extra tropical cyclones which lie on the synoptic scale. Athammalick, Angul of District like are particularly prone area. Cyclones originate out at sea and become hazardous when they come ashore. They also drive the sea level up to cause coastal flooding.

At a community level, the OSDMA has proposed to provide temporary cyclone shelter. There are 2 no's of site has been identified sites to construct Cyclone Shelter of Angul District. These shelters will be, with built-in safety against high wind velocity and heavy rainfall and within easy reach of the people most affected. Educational buildings or places of worship may also be designed as cyclone shelters, for evacuation and temporary occupation.

4. PHALIN (2013)

On October 4, the Japan Meteorological Agency started to monitor a tropical depression that had developed in the Gulf of Thailand, about 400 km (250 mi) west of Ho Chi Minh City in Vietnam. Over the next couple of days the system moved westward within an area of low to moderate vertical wind shear before it passed over the Malay Peninsula and moved out of the Western Pacific Basin on October 6. The system then subsequently emerged into the Andaman Sea during the next day, before the India Meteorological Department (IMD) started to monitor the system as Depression BOB 04 early on October 8. During that day the system moved towards the west-northwest into an environment for more development before the IMD reported that the system had become a deep depression early on October 9 as it intensified and consolidated further. The United States Joint Typhoon Warning Center subsequently initiated advisories on the depression and designated it as Tropical Cyclone 02B, before the system slightly weakened, as it passed near to Mayabunder in the Andaman Islands and moved into the Bay of Bengal.^{[14][15][16]} After moving into the Bay of Bengal, the system quickly reorganized as it moved along the southern edge of a subtropical ridge of high pressure. The IMD reported that the system had intensified into a cyclonic storm and named it Phailin 8 blocks of Angul District was affected 2 no's of Death and 1 Numbers of Missing was occurred in the Phailin, Large numbers of Trees and Thatched and Tile houses were affected severely.

5.Cyclone – TITILI (October 2018) , During October 2018 Severe cyclonic storm TITILI struck Odisha coast by this cyclone mostly Ganjam & Gajapati district were affected badly. Though Angul district was not affected severely but due to continuous rainfall most of the low lying areas of the district became inundated by rainfall, around 200 Ha of agriculture land affected by this and Khariff crop yield goes down, total amount disbursed towards house damaged support in TITILI cyclone to the people, Rs,27,80,000, Angul block was highly affected by this

6.Cyclone – FANI (May 2019) , Odisha recently grappled under the cyclonic storm of the FANI in the year 2019, this is a unique cyclone storm which occur during the month of May. This was a severe cyclonic storm after 99 super cyclone, around 12 lakhs people of the coastal district were evacuated, Angul district affected by this, people were evacuated to safe shelters & building, mostly 5046 people were evacuated from the blocks of the Athamallick, Angul, Barnarpal, free food and dry food arrangements were made for the people, -- no of households mostly Angul, Barnarpal, Chhendipada, Kanhia and Pallalahara,

7.Snake Bite : Snake bite is very common incident in the district, particularly in the rainy seasons mostly the poor farmers are the victims of this disaster. Most of the cases are coming from the Tikarapara, Satkosia in this areas alone 19 people died in Snake Bite, this is happening during agriculture activities, even the the relative of the victims are giving him local treatment through Tantric by this patient dies, Whereas the government is concern that in each PHC & CHC there are availability of the anti venom medicines.

8.Drowning : Drowning is a very common incidents among the boys at the tender age mainly school & college students are the victims of this incidents, in last year only 15 person are died in the lightening . Though district administration are doing awareness but the people are not taking it seriously.

9.Lightening – Now a days lightening is very common in Odisha each year around 600- 700 people are dieing in lightening due to lack of awareness. Massive campaign launched by the OSDMA to tackle this menace. Angul district is one of the victims of the lightening last year around 12 people died in lightening, mostly it is happening in Bantala areas of Angul Block.

ACTION TAKEN:-

- Fire stations people were instructed to keep ready with equipments
- Petrol pumps, FPS were instructed to keep stocks for an emergency.

- Tahsildar and BDO were instructed to be present at the head quarter
- NGOs persons were informed to be prepared for food packets needed during cyclone.
- At district Level, Meeting had been organized with District offici
- Boats were called back which was gone in River for fishery.
- NDRF, Special rescue teams were standing by at Angul.
- Do's and don'ts were published in local news paper.

10. MINING & INDUSTRIAL DISASTERS:

Spreading of Mining activities , Increasing number of thermal plants & chemical industry in Angul district has received a dramatic accelerated momentum in last one decade. Sophisticated technology complex processes and a wide range of Power generation products have emerged to provide better standards and improved way of living to millions of people.

Angul, Kanhia, & Talcher , Chhendipada, district has specific Coal Mines , Power plant factories . However the disaster preparedness as precautionary measures have envisaged by involving all the major Departments who are directly or indirectly responsible for Mining and Industries hazard.

- Ash ponds of NTPC, Kanhia, TTPS, Talcher , NALCO, Angul causes crop damage , animal death and water born diseases among the villageers of that area.
- NTPC, Kanhia, TTPS, Talcher , NALCO , Bhusan, Jindal , Monnet industries releasing toxic waste in water have to be encouraged to set up effluent treatment facility.

11. EPIDEMICS:

The Public Health Department is the nodal agency responsible for monitoring and control of epidemics or any water borne/ air borne diseases in the district . Local governments and municipal authorities also have a responsibility for taking appropriate steps in this context. Therefore, success of mitigation strategy for control of epidemics is depending on the type of coordination that exists between the Health Department and local authorities. Mitigation efforts for control of epidemics would include

1. Surveillance and warning
 2. Preventive and Primitive measures
 3. Strengthening institutional infrastructure like...
- Promoting and strengthening community hospitals with adequate network of Para-professionals will improve the capacity of the Health Department for surveillance and control of epidemics.
 - Establishing testing laboratories at appropriate locations in different divisions within the State will reduce the time taken for diagnosis and subsequent warning.

- Establishing procedures and methods of coordination between Health Departments and local authorities.

12.DROUGHT:

In the year 2017 Angul district affected by drought, drought a natural disaster frequently due to erratic rainfall, drought can have the greatest impact and affect the largest number of people. Droughts invariably have a direct and significant impact on food production and the overall economy. Drought, however, differs from other natural hazards. Because of its slow onset, its effects may accumulate over time and may linger for many years. The impact is less obvious than for events such as earthquakes or flood but may be spread over a larger geographic area. In the year 2017 few blocks were affected by the drought, by this drought mostly Pallalhara block & Athamallick blocks were affected

13.FIRE:

Fires may be caused due to explosions, electrical malfunctioning and various other causes. The State shall take up detailed assessment of fire hazards like preparation of inventories/maps of storage locations of toxic/hazardous substances, provision and regular maintenance of fire fighting equipment, identification of evacuation routes, fail-safe design and operating procedures, planning inputs, transportation corridors etc. In last April 2019 around 40 thatched houses were gutted by fire in Athamallick block. During summer seasons fire in rural areas are very common

FOREST FIRE –

“Since historical times, forest throughout the world has been adversely affected by fire. Fire always causes many direct or indirect effects on the forest ecosystem. They may merely be beneficial but at most of the times these effects are deteriorating. The damage to a forest by fire depends mainly on size of the fire. The main adverse impact of the uncontrollable forest fire includes damage to growing stock of forests, loss of biodiversity, increase in soil erosion, scorching of soil and reduction in its permeability and water retaining capacity and volatilization of the nutrients like Nitrogen. Not only for forest vegetation and environment, the forest fire causes direct loss to human being also in the form of damage to life and property.

1. Do not throw lighted matchsticks/ bidi /cigarette butts nearby forest areas.
2. Do not carry inflammable materials / cook in Forest areas.
3. In case of any small fire noticed, please extinguish using green boughs from trees and remove dry leaves in the vicinity by sweeping. In case of emergency and assistance please contact concerned Divisional Forest Officers (DFOs).

The phone numbers of the officers are given below table

Sl No	Forest Circle	Designation	Phone & Fax number	Mobile
-------	---------------	-------------	--------------------	--------

01	Angul	DFO	06764 230322 230322	9437030322
02	Athagarh	DFO	06723 220225 220235	9437008225
03	Athamallick	DFO	06763 254236 254236	9437004236
04	Dhnenkanal	DFO	06762 226717 226717	9437036717
05	Cuttack	DFO	0671 2340443 2347611	9437007611
06	Satakasia (WL)	DFO	06764 236218 236218	9437218600

In case of non- response from any field officer above to address the issue please send fire location details to the state nodal officers through SMS for immediate response. The phone numbers of the state nodal officers are given below. Designation Mobile Additional PCCF(P& SM) 9437038789 .

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

The world over, those responsible for Building Codes formulation recognize the need for a modern, up-to-date Fire Code, addressing conditions hazardous to life and property from fire, explosion, use of hazardous materials and the occupancies buildings and premises of late, building design, especially for high rise and special buildings has become a complex process, integrating many skills, products and techniques into its system. An intelligent building design is required to cater to various potential emergency situations. The main objective of fire safety design of buildings should be assurance of life safety, property protection and continuity of operations or functioning. The designer must recognize the type of danger posed by each component and incorporate effective counter-measures. Fire Protection Engineering has made substantial strides in its professional development. At present knowledge is available that can confine a hostile fire to a room or area of its origin. However, the new concept of composite construction, which is being increasingly adopted in North America and in some parts of Europe, has thrown up fresh challenges. Likewise, there has been tremendous advancement in the use of various kinds of plastics in the building industry and new types of roofings, walls, doors and false ceiling panels, core panels for walls and interior finish materials are being increasingly used. These have brought in their wake new fire and life safety problems. The need for all such products to be tested and evaluated for their behaviour in fire and flame propagation properties cannot be overemphasized in the interest of fire and life safety requirements. In the Angul TAMDA has ruled out a guideline to construct the high building in Angul, Talcher and Meramundali area under TAMDA .

Sl. No.	Name of the ULB/ Block	No. of High Rise	No. of High Rise Buildings where Fire & Life Safety Audit has been	Remarks
---------	------------------------	------------------	--	---------

		Buildings	carried out in last 2 years.	
1	Angul	8	8	All exit fire safty instruments available with evacuation plan
2	Talcher	1	1 (8917576308)	NA
3	Athamallik	0	0	NA
4	Chhendipada	0	0	NA
5	Pallhada	0	0	NA
6	Banrapal	0	0	NA
7	Talcher	0	0	NA
8	Kishorenagar	0	0	NA

HIGH RAISE BUILDING DETAILS :

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
1	Prafulla Mishra Aptment ,Angul	Hulusingha Chhack , 4 stories building	NA	NA	NA	NA
2	Omm residency Apertment ,Angul	Amala Pada, Angul	NA	NA	NA	NA
3	Vatika Aptment ,Angul		NA	NA	NA	NA

4	Jivandeep Apartment ,Angul		NA	NA	NA	NA
5	Hotel comelesh continental ,Angul	Tamiritri Colony, Circuit House	NA	NA	NA	NA
6	Hotel shanti,Angul	Bus Stand, Angul	NA	NA	NA	NA
7	MCH Building DHH,Angul	Near govt hospital		NA		
08	Hotel Durga Hotel	Turanaga	NA	NA	NA	NA
09	Hotel , Prasanti	Turanaga		NA		

LIGHTNING:

Lightning is a sudden electrostatic discharge that occurs during a thunder storm. This discharge occurs between electrically charged regions of a cloud (called intra-cloud lightning or IC), between two clouds (CC lightning), or between a cloud and the ground (CG lightning).

The charged regions in the atmosphere temporarily equalize themselves through this discharge referred to as a *strike* if it hits an object on the ground, and a **flash**, if it occurs within a cloud. Lightning causes light in the form of plasma, and sound in the form of thunder. Lightning may be seen and not heard when it occurs at a distance too great for the sound to carry as far as the light from the strike or flash.

Lightning Impact at Angul district is high in compare to other district. Most of death during June July, August Monsoon period causes due to lightning.

Division wise Main River Embakements needs to be protected

SI No.	Irrigation Division	Name of the embakements	Type	Length
01	Angul	TRE at Barakuma on Brahamni left	TRE	0.60
	Angul	TRE Parabil on Brahamni left	TRE	0.19
	Angul	TRE at Katarapada on	TRE	0.66

		Brahamani left		
	Angul	TRE at Kulei on Brahamani left	TRE	0.10
	Angul	TRE at Tumugula at Brahamni left	TRE	0.16
	Anugul	TRE at Jhadiamba at Brahamni left	TRE	0.12
	Anugul	TRE at Khoilua at Brahamni left	TRE0.50	
	Anugul	OAE at Takua on Tikira Left (Brahamini Basin)	OAE	0.33
	Anugul	OAE at Takua on Shatpada Left (Brahamini Basin)	OAE	0.33
	Anugul	OAE at Belpunji on Mahandai Left	OAE	2325

Other Embakements Needs to be protected :

List of Embankments : Sl. No	Name of the A/C	Name of the Vulnerable Point	Length of Embankments	Name of the River
1	Athmallik	Other Agricultural Embankment at Belpungi	1.27 K.M.	Mahanadi Left
2	Talcher	Other Agricultural Embankment at Santhapada	0.54 K.M.	Brahmani Right
3		Masonry wall at Talcher Town	0.73 K.M.	Brahmani Right
4		Trail Relief Embankment at Takua	0.33 K.M.	Tikira right
5		Masonry wall at Sanatribeda	0.064 K.M.	Dempajor Right
6		Masonry wall at Badatribeda	0.035 KMs	Dempajor left
7		Trail Relief Embankment embankment at Tumugola	0.16 KMs	Brahmani left
8		Trail Relief	0.12 KMs	Brahmani right

		embankment at Jhariamba		
9		Trail Relief Embankment embankment at Kholua	0.50 Kms.	Brahmani right
10	Chhendipada	Protection to scoured bank near village – Takua	0.40 K.M.	Kumbhira Nallah Left
11	Pallahara	Trail Relief Embankment embankment at Burukuna	0.60 KM	Samakoi Left
12		Trail Relief Embankment embankment at Arakila	0.10 KM	Brahmani Left
13		Trail Relief Embankment embankment at Parabil	0.19 KM	Samakoi Left
14		Trail Relief Embankment embankment at Katarapada	0.66 KMs	Brahamani left
15		Trail Relief Embankment embankment at Kulei	0.10 KM	Brahamani left

SUNSTROKE:

Heat stroke, also known as **sun stroke**, is a severe heat illness, defined as hyperthermia with a body temperature greater than 40.6 °C (105.1 °F) because of environmental heat exposure with lack of thermoregulation. This is distinct from a fever, where there is a physiological increase in the temperature set point of the body. The term "stroke" in "heat stroke" is a misnomer in that it does not involve a blockage or haemorrhage of blood flow to the brain. Preventive measures include drinking plenty of cool liquids and avoiding excessive heat and humidity, especially in unventilated spaces, such as parked cars, that can overheat quickly.

Treatment requires rapid physical cooling of the body. So far concern to Angul district its topography scenarios' are three major regions. The Central portion is represented by sediments deposited in the Satpura-Mahanadi graven defined by pronounced NW-SE trending lineaments on a Precambrian platform, almost separating the Eastern Ghat Mobile Belt. The northern boundaries of Talcher Basin are faulted. On a regional scale, Talcher basin takes the shape of a north westerly plunging syncline with closure in the east and the younger horizon

outcropping progressively towards west. On the other hand, the beds dip northerly and number of coal seams increases in that direction indicating a possible homoclinal structure. Three sets of intrabasinal faults trending E-W-NE-SW-WNW-ESE have been recognized. The north and north east part is occupied by hill ranges of Iron Ore Super group. The elevation varies from 76m to 1186m. The highest peak of the district is Malyagiri of Pallahara sub-division which is 1186 meter above MSL. Banamadali peak in Angul sub-division is 790 meter in height. In Athamalik sub-division the main peaks are Panchadhara and Hingamandal hills. It causes the highest temperature in the district. Talcher is the hottest block and Angul hottest district in Odisha. It causes major loss of human life and bovine also.

BOAT ACCIDENT

In concern to river system in the district the major rivers are flowing through the district. Some parts of district like Athhamallick locality depends upon ferry Ghats. The Ferry Ghats are not in much demand during the fair weather and dry season. However during rainy season people require to cross the river, nallah and joras with the help small country boats. Apart from the ferry Ghats in river Mahanadi and Brahmani, people of Athamallik locality use country boat to cross river Mahanadi near Binikei Ghat. As per the history of district disaster 2012-13 Boat accident was happened 4 no's of Human life had lost.

ROAD ACCIDENT

Reviewing Existing Road and Railway Connectivity of Angul District Communication Facilities Km / No National Highway (Km) 257 State Highway (Km) 60.50 Major District Road (Km) 134.30 Other District Road (Km) 383.40 Rural Road (Km) 691.04 Forest Road (Km) 458.03 GP Road (Km) 56.70, PS Road (Km) 656 Railway Route (Km) 104 Railway Stations (No) 11 Causes high accident prone area. Chhendipada and Athamallik block is high area under Road accident. It covers under Redcross Society.

Road accident in the district – Case 2018

No	Block Name /ULB	No of PS	No of accident took place	People died in road accident
01	Angul Munico;ality	Angul PS	73	33
	Talcher municipality	Talcher PS	39	21

	Athamallick NAC	Athamallick PS	08	03
	Angul Block	Banatala	21	09
		Jarapada	46	21
		Purunakote	03	02
	Banarpal	Banarpal	35	21
		Nalco PS	22	11
	Chhendipada	Chhendipada	19	11
		Industrial PS	22	09
	Talcher block	Coillery ps	20	12
		Vikrampur ps	06	02
		Samal ps	23	12
	Kanhia block	Kanhia ps	15	08
		Ntpc ps	07	02
	Pallahara	Khamar	28	18
		Rengali	06	01
	Athamallick	Thakuragada	17	07
		Kiakata	02	01
	Kishorenagar	Kishorenagar	18	10
		Handappa	35	18

HAILSTORM

Hailstorms are rain drops that fall as ice, rather than melting before they hit the ground. A particularly damaging hailstorm hit [Munich](#) Anti-hail nets can be used to protect crops from hailstones. However, the protection is rarely installed to protect some important farms only because its installation and handling costs are very

expensive for large area farm. In the event of strong hail storms, the anti-hail nets are not efficient. Consequences are potentially even worse than for a completely unprotected farm because the nets structure collapses on the area and the farmer will often be forced to replant the entire affected area. To protect themselves against losses due to natural disasters like hail, drought and flood, etc. The agriculture producers including farmers can purchase crop insurance whichever available and applicable to them.

LANDSLIDE

A landslide is defined as "the movement of a mass of rock, debris, or earth down a slope". Landslides are a type of "mass wasting" which denotes any down slope movement of soil and rock under the direct influence of gravity. So far Angul district concern and as per the history of the district disaster no stamped has happened in district till date.

STAMPED

A **stampede** is uncontrolled concerted running as an act of mass impulse among a crowd of people in which the group collectively begins running, often in an attempt to escape a perceived threat. Stampedes" (and "panics") rarely occur except when many people are fleeing in fear, such as from a fire, and trampling by people in such "stampede" conditions rarely causes fatal injuries. So far Angul district concern and as per the history of the district disaster no stamped has happened in district till date.

A. Major Disasters/ Incidents during 2006-2015 (History of the Disaster ,Angul)

A brief profile of major disasters/ incidents occurred in the district during last 10 years (2009 to 2019):

Table No. : 1

[Year wise details of each disaster occurred during the last 10 years is at Table No. 3.1 of Volume II of DDMP]

Sl. No.	Disaster / Incident	during 2009-2019	No. of Deaths	Affected Population	Livestock Loss	Houses Damaged	Damage to Infrastructure				Crop Area (in Hectares)
							School/AWC Buildings	Hospitals	Road in Km.	Other Critical Infrastructure	
Disasters as approved under SDRF/NDRF Guidelines											
1.	Flood	4	12	1405	317	676	150	8	79 Km	145	486 acres
2.	Drought	2	0	179	0	0	0	0	0	0	
3.	Fire	889	01	937	53	945	nil	nil	nil	nil	nil
4.	Hail Storm	0	0	0	0	0	0	0	0	0	0
5.	Cyclone	3	0		28	8353	761	0	236.75	1104	22326.5
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	0	0	0	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	1	0	3600	0	0	0	0	0	0	822.23
12.	Cold Wave/ Frost	0	0	0	0	0	0	0	0	0	0
State Specific Disasters as per Notification No.1936, Dt. 01.06.2015											
13.	Lightning	94	35	198	178	0	0	0	0	0	0

14.	Heat wave	1	1	1	0	0	0	0	0	0	0
15.	Whirlwind	29	0	4075	0	815	0	0	0	0	0
16.	Tornado	0	0	0	0	0	0	0	0	0	0
17.	Heavy Rain	8	0	213	0	120	0	0	0	0	
18.	Boat Accidents (Other than during Flood)	2	0	0	0	0	0	0	0	0	0
19.	Drowning (Other than during Flood)	13	13	13	0	0	0	0	0	0	0
20.	Snake Bite (Other than during Flood)	33	20	5	0	0	0	0	0	0	0

Other Disasters

21.	Animal Menace (2010-11)	4	4	4	0	0	0	0	0	0	0
22.	Building Collapse	1	2	6	0	0	0	0	0	0	0
23.	Stampede	0	0	0	0	0	0	0	0	0	0
24.	Epidemics	0	0	0	0	0	0	0	0	0	0

25.	Industrial/ Chemical Accidents	0	0	0	0	0	0	0	0	0	0
26.	Road Accidents	431	333	1500	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.	Communal Riot	Nil	0	0	0	0	0	0	0	10	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										

A. Major Disasters/ Incidents in the District during 2018-19 :

Table: 02

Sl. No.	Disaster/ Incident	No. of incidents during 2016	No. of Deaths	Affected Population	Lives lost	Houses Damaged	Damage to Infrastructure				Damage and loss of Crop Area (in
							AWC / School Buildings	Hospitals	Road in Km.	Other Critical Infrastructure	

										ure	Hect ares)
1	Heat Wave	09	3	20	--	--	--	--	--	--	--
2	Road Accidents	187	155	--		--	--	--	--	--	--
3	Lightning	20	7	16		--	--	--	--	--	--
4	Snake Bite	30	22			--	--	--	--	--	--
5	Drowning	7	5	25		--	--	--	--	--	--
6	Hail Storm	--	---	---	--						
7	Fire Accident	288	01		--	1254	--	--	--	--	--

[Only the Disasters held in the district during 2016 to be mentioned in the table. The NDMA approved disasters to be mentioned first followed by State Specific Disasters and Others]

B. Road accident in the district – case 2018

No	Block Name /ULB	No of PS	No of accident took place	People died in road accident
01	Angul Municipality	Angul PS	73	33
	Talcher municipality	Talcher PS	39	21
	Athamallick NAC	Athamallick PS	08	03
	Angul Block	Banatala	21	09
		Jarapada	46	21
		Purunakote	03	02
	Banarpal	Banarpal	35	21
		Nalco PS	22	11

	Chhendipada	Chhendipada	19	11
		Industrial PS	22	09
	Talcher block	Coillery ps	20	12
		Vikrampur ps	06	02
		Samal ps	23	12
	Kanhia block	Kanhia ps	15	08
		Ntpc ps	07	02
	Pallahara	Khamar	28	18
		Rengali	06	01
	Athamallick	Thakuragada	17	07
		Kiakata	02	01
	Kishorenagar	Kishorenagar	18	10
		Handappa	35	18

C. Vulnerability and Risk Assessment related to disasters:

[Note: The Hazards towards which the district is more vulnerable to be discussed in detail]

1. Cyclone:

[Brief description about the tropical cyclones, type and the vulnerability of the district to be discussed followed by the table]

Table No. 03: 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

										ure
1	Angul	8	40	7250		172 6	4	1		
2	Athamallick	16	60	18320		459 4	26	1		
3	Kishore nagar	7	30	36809		888 5	10	1		
4	Banrapal	1	1	546		158				
5	Chhendipad a	2	4	3278		796				
6	Pallalahara	NA	NA	NA	NA	NA	NA	NA	NA	NA
7	Talcher	NA	NA	NA	NA	NA	NA	NA	NA	NA
8	Chhendipad a	NA	NA	NA	NA	NA	NA	NA	NA	NA

[Note: Based on historical data the table to be filled up. Only concerned Blocks / ULBs to be mentioned.]

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

Electrical Infrastructure and cyclone Vulnerability:

Table No. 04

Sl. No.	Name of the Block/ ULB	No. of Grid Stations	No. of 33/11 KV Substations	No. of Distributing Transformers			Conductor/ Electrical lines- 11 KV or less (length in Kms.)	No. of Poles	No. of High Tension Towers	High Tension lines above 11 KV (length in Kms.)
				11 KV or Less	11 KV < and <60 KV	60 KV and above				

)
1	ANGUL	1	4	10 83	Nil	Nil	1854	370 80	Nil	37.9
2	ATHAMALL IK		2	79 9	Nil	Nil	1045	209 00	Nil	46
3	BANARPA L		0	35 0	Nil	Nil	733	146 60	Nil	0
4	CHHENDIP ADA		2	85 6	Nil	Nil	1022.5	204 50	Nil	41.5
5	KISHOREN AGAR	1	3	72 2	Nil	Nil	1603	320 60	Nil	43.5

Table No.05: **Drinking water facility in the Cyclone prone areas:**

Sl. No.	Name of the Block/ ULB	Total No. of Tube Wells	No. of Wells	PWS Schemes				Other Drinking Water Sources If any
				Total No.	Length in Mtrs.	No. of Over Head tanks	No. of Stand Points	
1	Angul	8	NA	NA	NA	NA	NA	NA
2	Athamallick	16	NA	NA	NA	NA	NA	NA
3	Kishore nagar	7	NA	NA	NA	NA	NA	NA
4	Banrapal	1	NA	NA	NA	NA	NA	NA
5	Chhendipada	2	NA	NA	NA	NA	NA	NA
6	Pallalahar	NA	NA	NA	NA	NA	NA	NA
7	Talcher	NA	NA	NA	NA	NA	NA	NA
8	Chhendipada	NA	NA	NA	NA	NA	NA	NA

TSUNAMI:

[Brief description on the Tsunami vulnerability of the district and past incidents if any.]

Table No. 06 : Tsunami vulnerable areas of the district:

Sl. No.	Name of the Block/ ULB	No. of susceptible Gram Panchayats	No. of susceptible Villages/ Wards	Vulnerable Population in Nos.	Milch and Draught animals	Houses	Vulnerable Infrastructure			
							School Buildings/ Angan wadi	Hospitals	Roads (in Km)	Other critical Infrastructure
1	Angul	NA	NA	NA	NA	NA	NA	NA	NA	NA
2	Athamallik	NA	NA	NA	NA	NA	NA	NA	NA	NA
3	Kishore nagar	NA	NA	NA	NA	NA	NA	NA	NA	NA
4	Banrapal	NA	NA	NA	NA	NA	NA	NA	NA	NA
5	Chhendipada	NA	NA	NA	NA	NA	NA	NA	NA	NA
6	Pallalahar	NA	NA	NA	NA	NA	NA	NA	NA	NA
7	Talcher	NA	NA	NA	NA	NA	NA	NA	NA	NA
8	Chhendipada	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

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

Flood:

[Brief description on the flood vulnerability of the district and past incidents to be discussed.]

Table No. 07: Flood vulnerable areas of the district in general.

Sl. No.	Name of the Block/ ULB	No. of susceptible Gram Panchayats	No. of susceptible village s/ Wards	Population in Nos.	Milch and Draught animals	Houses	Vulnerable Infrastructure			
							School/ AWC Buildings	Hospitals	Roads (in Km)	Other Critical Infrastructure
1	Athamallick	13	52	32890		6594	16	1		
2	Palalhada	2	4	3567	-	906	2	1		
3	Chhendipada	1	7	4278		796	6			
04	Angul	3	16	1700		656	4	2	4 km	

[Note: Based on historical data the tables to be filled up. Only relevant blocks to be mentioned.]

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

Table No. 08: Causing agent wise flood vulnerable areas of the district:

S I. No.	Causing agent- Rivers/ Water bodies/	No. of Susceptible Blocks / ULB	No. of Susceptible GPs	No. of Susceptible Villages	Vulnerable Population	Milch and Draught	Houses	Vulnerable Infrastructure			
								School/ AWC Buildings	Hospitals	Roads (in Km)	Other Critical

	Tidal Wave/ Others			ges/ Ward s		ani mal s		ngs)	Infr a.
1	Mahana di	Angul/ Atham allik	1/13	52	32890	--	--	--	--	--	
2	Brahma ni	Talcher /Kanih a	--	--	--	--	--	--	--	--	
3	Tikira	Chhen dipada	02	07	4278	--	--	--	--	--	
4	Rengali/ Somako i	Pallaha ra	01	04	3567	--	--	--	--	--	
5	Others(Ashpon d)	Talcher /kaniha									

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

Table No. 09: 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	Angul	12410	20651	300	120
2	Banarpal	10545	13885	0	0
3	Chh.pada	12820	21775	0	0
4	Athmallik	12405	23478	2200	0
5	Kishornagar	8630	15594	2200	0
6	Talcher	7645	4211	0	0
7	Kaniha	12595	13389	580	70
8	Pallahara	10640	9734	0	0
	Total	88050	122695	3080	190

Table No. 10 :Electrical Infrastructure in the Flood Prone Area

Sl. No	Name of the Block/ ULB	No. of 33/11 KV Substations	No. of Distributing Transformers			Conductor/ Electrical lines- 11 KV or less (length in Kms.)	No. of Poles	No. of High Tension Towers	High Tension lines above 11 KV (length in Kms.)
			11 KV or Less	11 KV < and <60KV	60 KV and above				
1	ANGUL		50			90.5	1822		0
2	ATHAMALLIK		30			62.0	1240		0

Table No.11 :Drinking water and Flood Vulnerability:

Sl. No	Name of the Block/ ULB	Total No. of Tube Wells	No. of Tube Wells with raised platforms	No. Sanitary Wells	PWS Schemes				Other Drinking Water Sources If any
					Total No.	Length in Mtrs.	No. of Over Head tanks	No. of Stand Points	
1	Angul	2138	--	27	39	--	--	--	--
2	Banarpal	1794	--	9	24	--	--	--	--
3	Chhendipada	1661	--	117	42	--	--	--	--

4	Talcher	1371	--	3	27	--	--	--	--
5	Kaniha	1855	--	12	38	--	--	--	--
6	Athamallik	1739	--	43	19	--	--	--	--
7	Kishorenagar	1610	--	36	25	--	--	--	--
8	Pallahara	1897	--	57	35	--	--	--	--
Total		14065	--	304	249		--	--	--

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

[The events where the strength of population gathering is 5000 or above is to be mentioned in the table]

Table No. 12

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 the mentioned)
1	Dushahara (Durgapuja)	District Headquarter, Angul	3 days	Sept	20000-30000	No
2	Laxmipuja	Angul/ Pallahara	11 days	October	80000-100000	Electrical
3	Ganesh puja	Talcher, Angul	9 days	August	80000-100000	Electrical
4	Hingula Jatra,	Gopalprasad, Talcher	9 days	May	80000-100000	No
5	Ratha Jatra	Angul, Talcher, Pallahada, Athamallik	1 day	June	40000-50000	No
6	Bahuda Jatra	Angul, Talcher,	1 day	June	30000-40000	

		Pallahada, Athamallik				
7	Kosala Jatra	Kosala, Chhendipada	3 Days	January	30000- 50000	No
8	Lovi Thakurani Jatra	Gada Santri, Banarpal	4 Days	November	20000- 30000	No
09	Kali Puja	MCL -Talcher Block	4 Days	November	15000 above	
10	Biswakara ma Puja	Nalco nagar	3 days	October - November	20000 above	
11	Chandan yatra	Nunkaposi, Athamallik Block	2 days	May	15000 above	

1. Boat operation points:

Table No. 13:

Sl. No.	Name of the Block	Name of the ghat/ boat operation point	Name of the water body	No. of Panchay ats/ villages connecte d	Daily to and fro movement of people in Nos. (Approx.)	Type of boats operating in Nos.	
						Mech a nised	Non- Mecha nised
1	Angul	Binkei	Mahandi	4	--	✓	
	Angul	Tikarpada	Mahandi	5	--	✓	
	Angul	Tikarpada	Mahandi	4	--	✓	
	Angul	Chakragargh	Mahandi	4	--	✓	
2	Athamallik	Bhoipda	Mahandi	3	45		✓
	Athamallik	Deulei	Mahandi	2	20		✓
	Athamallik	Satabanduli	Mahandi	3	20		✓
	Athamallik	Lunahandi	Mahandi	2	72		✓
	Athamallik	Dolamundi	Mahandi	4	40		✓
	Athamallik	Olath	Mahandi	4	30		✓
	Athamallik	Bahali	Mahandi	3	18		✓

	Athamallick	Kudgoan	Mahandi	2	32		✓
	Athamallick	Binkei	Mahandi	3	48		✓
3	Chhendipada	Kamapalasa	Tikira	2	98		✓
4	Talcher	kankil	Brahmani	4	24		✓
	Talcher	Kalambari	Brahmani	4	--		✓
	Talcher	Belpada	Brahmani	3	--		✓
5	Kaniha	Susuba	Brahmani	2	64		✓
	Kaniha	Bajrakot	Brahmani	3	96		✓
	Kaniha	Gunduri	Brahmani	2	112		✓
	Kaniha	Nalam	Brahmani	4	124		✓
	Kaniha	Karnapal	Brahmani	4	96		✓
	Kaniha	Siling	Brahmani	3	80		✓
	Kaniha	Durgapur	Brahmani	2	10		✓
	Kaniha	Burubahal	Brahmani	3	60		✓
	Kaniha	parabil	Brahmani	2	94		✓
6	Pallahara	Burubura	Samakoi River	3	--		✓
	Pallahara	Haripur	Rengali	4	--		✓
7	Kishore nagar	Kumuri singha	Manjor Reservoir	2	150		✓

2. Land Slide Vulnerability:

Table No. 14

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	NIL
---	-----

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

3. Lightning:

Table No. 15

Sl. No.	Name of the Block/ ULB	Identifiable incidents of lightning hit in last 5 years		No. of Lightning events	No. fatality/ Deaths	Injured Persons
		No. GPs	No. Villages/ Wards			
1	Angul	3	21	21	10	02
2	Banarpal	2	20	20	0	0
3	Chhendipada	2	16	4	0	0
4	Talcher	3	9	7	0	0
5	Kaniha	3	11	3	0	0
6	Athamallik	2	8	5	0	0
7	Kishorenagar	2	4	4	0	0
8	PALAHARA	2	5	4	0	0

[List of villages is at Table No. 3.2 of Volume II of the DDMP]

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

Table No. 16-

Sl. No.	Name & location of the Industry/ Storage point	Department/ Ownership	Name of hazardous materials stored	Quantity	Total no. of workers in the establishment
01	M/s CPP Nalco Ltd, At/PO-Nalco Nagar, Angul		Chlorine Hydrogen HFO LDO	45 Ton 0.210 Ton 4100 KL 2700 KL	
02	M/s TSTPS (NTPC		Hydrochlori	270 Ton	

	Ltd), At/PO- Kaniha, Angul		c Acid Caustic Soda Liquid Chlorine	200 Ton 22.5 Ton	
03	M/s Jindal Steel & Power Ltd, At/PO- Nisha, Angul		Chlorine Ammonia Sodium Hydroxide LDO Hydrochloric Acid Propane Methanol Hydrazine Gasification oil Liquid Oxygen	36 MTon 2460 MTon 36 MTon 44 KL 40 MTon 450 MTon 1181 MTon 2 MTon 2800 KL 1500 Ton	
04	M/s Jindal India Thermal Power Ltd, At/PO- Derang, Angul		Chlorine Hydrogen HFO LDO HSD Sulphuric Acid Hydrochloric Acid Caustic lye	28.8 Ton 0.147 Ton 364 Ton 40 Ton 11.2 Ton 7 Ton 18 Ton 10 Ton	

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

DROUGHT:

[Table to be filled based on data available at the district level. Information for all the blocks of the district to be given]

Table No. - 17

Sl.	Name of the	Average	Ground	Cultivated Area (In Hectares)
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No.	Block	Annual Rain Fall	Water Level	Paddy		Non- Paddy	
				Rain fed Area	Irrigated area	Rain fed Area	Irrigated area
1	Angul	1297.00		5240	7190	18401	2409
2	Banarpal	1187.00		3301	7669	11165	2655
3	Chhendipada	1163.50		5802	7038	18311	3324
4	Athmallik	1316.80		4028	8412	20882	2498
5	Kishornagar	1319.40		4705	3915	12855	2775
6	Talcher	1219.60		5563	2107	2937	1243
7	Kaniha	1084.70		7109	5511	10060	3350
8	Pallahara	1638.70		4252	6413	3141	6634
Total		1401.90	Normal	40000	48255	97752	24888

Table No. 18: Drought Vulnerability.

Sl. No	Name of the Block	Year- 2013			Year – 2014			Year-2015			Year- 2016		
		No. of GPs	No. of Villages	Agricu ltural	No. of Non- Paddy	No. of Villages	Agricu ltural	No. of Non- Paddy	No. of Villages	Agricu ltural	No. of Non- Paddy	No. of Villages	Agricu ltural
1	Angul							31	206	2858.514	0		
2	Banar pal							20	120	4606.161 6	0		
3	Chh.p ada		- nil -			- ni l -		34	174	9670.540 1	0		

4	Athmalik							24	319	1280.2499	0	
5	Kishornagar							26	177	2792.5	0	
6	Talcher							26	289	1801.00	0	
7	Kaniha							24	294	3760.00	0	
8	Pallahara							21	239	4941.00	0	
Total								206	1818	31709.9656	0	

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

1. DRINKING WATER CRISIS:

Table No. 19:

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	Angul	--	--	5	1495	--	--	--
2	Athamallik	--	--	13	3394	--	--	--

3	Banarpal	--	--	28	9029	--	--	--
4	Chhendipada	--	--	66	14586	--	--	--
5	Kaniha	--	--	33	6534	--	--	--
6	Kishorenagar	--	--	23	8142	--	--	--
7	Pallahara	--	--	7	2524	--	--	--
8	Talcher	--	--	57	12825	--	--	--

[Block wise village list is at Table No. 3.2 of Volume II of the DDMP]

2. Railway Line Exposed different Hazards:

[Note: Total length railway line, number of stations and movement of trains to be discussed first followed by the table]

Table No. 20-

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

3. ROAD ACCIDENTS:

[For national and state highways only. The total network of state and national highways in the district to be discussed in detail followed by the table]

Table No- 21:

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

NH -55 Identified Road Accident Location

1	Jarapada to Boinda	03Kms	Banarapal Chhack	2	
	CPP to kandasar	03 Kms	Nalco Chhack	3	
	Caltax to Hotel Raj	300 Mtrs	PTC areas	1	
	Badakera to Tubey	2.5 Kms	Badakera Chhack	3	
	Boinda Chhack	300 mtrs	Boinda Chhack	1	
	Sarigipalli Chhack	300 Mtrs		1	
	Panchamahala to Ranteli	03 Kms	Bantala Chhack	2	

National Highway no -149

01	Gotamara to Reliance Petrol Pum	2 Kms	NA	2	
02	Dimirbeda Chhack	500 Mtrs	NA	1	
03	Banjikusum Chhack	500 Mtrs	NA	1	
04	Baliposi to Kantiaposi Chhack	3 Kms	Khamar Chharck	2	

National Highway No -49

01	Jhirimiripali to Kantala	4 Kms	Pallalahra	2	
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State Highway 63

01	Kosala to Darpani Bandh	500 Mtrs	NA	2	
----	-------------------------	----------	----	---	--

Road Accident Detail Case in the year 2018

No	Block Name /ULB	No of PS	No of accident took place	People died in road accident
01	Angul municipality	Angul PS	73	33
02	Talcher municipality	Talcher PS	39	21
03	Athamallick NAC	Athamallick PS	08	03

04	Angul Block	Banatala	21	09
05		Jarapada	46	21
06		Purunakote	03	02
07	Banarpal	Banarpal	35	21
08		Nalco PS	22	11
09	Chhendipada	Chhendipada	19	11
10		Industrial PS	22	09
11	Talcher block	Coillery ps	20	12
12		Vikrampur ps	06	02
13		Samal ps	23	12
14	Kanhia block	Kanhia ps	15	08
15		Ntpc ps	07	02
16	Pallahara	Khamar	28	18
17		Rengali	06	01
18	Athamallick	Thakuragada	17	07
19		Kiakata	02	01
20	Kishorenagar	Kishorenagar	18	10
21		Handappa	35	18

SOCIAL SECURITY:

Sl. No.	Block/ULB	No. of Persons covered under Old Age Pension Schemes		No. of Persons Covered under Widow Pension	No. of Persons covered under Disability Pension	
		Male	Female		Male	Female
1.	Angul	5139	3780	4423	1249	785
2.	Banarpal	6794	4079	4710	1018	722
3.	CHHENDIPADA	7163	4292	4854	896	553

4.	ATHMALLIK	5157	2209	3376	842	458
5.	Kishorenagar	5097	3908	3395	652	489
6.	Talcher	2575	2281	3611	852	570
7.	Kaniha	7164	3629	3766	745	499
8.	Pallahara	6041	5623	2660	1147	909
9.	Talcher Municipality	786	384	945	191	119
10.	Athamallik NAC	426	312	393	74	62
11.	Angul Municipality	335	266	554	171	114

4-Population Requiring Special Care:

Table No: 22-

Sl. No.	Block/ ULB	No. of HHs headed by PWD	No. of Persons With Disability		No. of Widow	No. of Orphans		No. of Aged Persons (60 and above)	
			M	F		M	F	M	F
1.	Angul	-	-	-	2	-	01	-	2
2.	Banarpal	NA	NA	NA	NA	NA	NA	NA	NA
3.	CHHENDIPADA	NA	NA	NA	NA	NA	NA	NA	NA
4.	ATHMALLIK	NA	NA	NA	NA	NA	NA	NA	NA
5.	Kishorenagar	NA	NA	NA	NA	NA	NA	NA	NA
6.	Talcher	NA	NA	NA	NA	NA	NA	NA	NA
7.	Kaniha	NA	NA	01	NA	NA	NA	01	01
8.	Pallahara	NA	NA	NA	NA	NA	NA	NA	NA
9.	Talcher Municipality	NA	NA	NA	NA	NA	NA	NA	NA
10.	Athamallik NAC	NA	NA	NA	NA	NA	NA	NA	NA
11.	Angul Municipality	NA	NA	NA	NA	NA	NA	NA	NA

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

History of Disaster in the District

Type of Hazard	2012-2013	2013-14	2014-15		2014-2015
Lightening	08	16	08	16	03
Sunstroke	04	02	11	--	05
Boat Accident	--	--	04	--	01
Hailstorm	--	--	--	--	--

Flood	01	01	--	--	--
Fire Accident	01	02	01	02	01
Phailn	2012-13	--	--	02 (Dead)	
		--	--	01 (Missing)	--

Cultural Heritage Sites & Areas of the District : Angul

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.	Jhadiamaba	Pallalahara	State Protected	Lokantha Dwidevei		
2.	Deuljhari	Athamallick Block	State Protected	Lokantha Dwidevei		
3.	Saranga	Brahamani River, Talcher	State Protected	Lokantha Dwidevei		
4.	Sanakerjanga	Angul Block	State Protected	Lokantha Dwidevei		

SEASONALITY OF HAZARDS

H: Human, C: Crop, A: Animals, I: Infrastructure

Type of Hazards	Jan-Mar				April-June				July-Sep				Oct-Dec			
	H	C	A	I	H	C	A	I	H	C	A	I	H	C	A	I
Flood									←	→						
Cyclone					←	→							←	→		
Earthquake	←															→
Heatstroke					←	→										
Drought									←	→						
Hailstorm				←	→											

3.3 Identification of Weak and Vulnerable embankments

Sl. No	Name of the A/C	Name of the Vulnerable Point	Length of Embankments	Name of the River
1	Athmallik	OAE at Belpungi	1.27 K.M.	Mahanadi Left
2	Talcher	OAE at Santhapada	0.54 K.M.	Brahmani Right
3		Masonry wall at Talcher Town	0.73 K.M.	Brahmani Right
4		TRE at Takua	0.33 K.M.	Tikira right
5		Masonry wall at Sanatribeda	0.064 K.M.	Dempajor Right
6		Masonry wall at Badatribeda	0.035 K.M.	Dempajor left
7		TR Embankment at Tumugola	0.16 K.M.	Brahmani left
8		TR Embankment at Jhariamba	0.12 K.M.	Brahmani right

9		TR Embankment at Kholua	0.50 K.M.	Brahmani right
10	Chhendipada	Protection to scoured bank near village – Takua	0.40 K.M.	Kumbhira Nallah Left
11	Pallahara	TR Embankment at Burukuna	0.60 K.M.	Samakoi Left
12		TR Embankment at Arakila	0.10 K.M.	Brahmani Left
13		TR Embankment at Parabil	0.19 K.M.	Samakoi Left
14		TR Embankment at Katarapada	0.66 K.M.	Brahamani left
15		TR Essmbankment at Kulei	0.10 K.M.	Brahamani left

Forest Vulnerability

Sl. No.	Forest Area/Block/UL B	No. of Animal Menace/ Incidences during 2018	No. of Human Deaths	Affected Population	Livestock Loss	Houses Damaged	Damage and loss of Other Items
1.	Angul District all the division consolidated data	10	4	18	0	84	7325 Nos. 1576.69 Acre
	Total						

Forest Fire details

Sl. No.	Name of the Division	Range	No. of Fire Incidents Reported during last 5 Years	Area Affected in Acre.	Loss of life/ property if any
---------	----------------------	-------	--	------------------------	-------------------------------

			For the year - 2014		
1	Angul Forest Division	Angul	4	9.0	0
2		Bantala	0	0	0
3		Chhendipada	0	0	0
4		Jarapada	0	0	0
5		Talcher	0	0	0
6		Kaniha	5	0.5	0
		Total	9	9.5	0
			For the year - 2015		
1		Angul	1	2.0	0
2		Bantala	0	0	0
3		Chhendipada	3	12.0	0
4		Jarapada	0	0	0
5		Talcher	2	4.0	0
6		Kaniha	1	5.0	0
		Total	7	23	0
			For the year - 2016		
1		Angul	3	5.8	0
2		Bantala	2	12.0	0
3		Chhendipada	10	17.5	0
4		Jarapada	4	0.25	0
5		Talcher	3	1.185	0
6		Kaniha	1	3.0	0
		Total	23	39.735	0

			For the year - 2017		
1		Angul	13	20.0	0
2		Bantala	6	33.0	0
3	Total	Chhendipada	35	91.0	0
4		Jarapada	90	175.1	0
5		Talcher	27	31.2	0
6		Kaniha	51	83.5	0
		Total	222	433.8	0
			For the year - 2018		
1		Angul	133	36.39	0
2		Bantala	3	1.2	0
3		Chhendipada	84	112.15	0
4		Jarapada	88	38.29	0
5		Talcher	70	31.1	0
6		Kaniha	139	81.5	0
		Total	517	300.63	0

MAN & ANIMAL CONFLICTS CASES IN DISTRICT

LOSS OF HUMAN LIVES

Year	Sl. No.	Vulnerable Place/ Location	Revenue Village	Gram Panchayat	Causing Agent/Animal (Elephant, Bear, Crocodile etc.)	Number of Human Lives lost during last 5	Damage to House and Property during last	Crops Damaged	
								No. Of Victim	Area in Acre

						years	5 years		
2015-16	1	Chhendi pada			Elephant / Bear	8	1	721	199.33
	2	Bantala			Elephant / Bear	0	0	227	79.25
	3	Kaniha			Elephant / Bear	0	0	236	57.46
	4	Talcher			Elephant / Bear	2	0	949	283.56
	5	Jarapada			Elephant / Bear	1	0	132	59.252
	6	Angul			Elephant / Bear	0	0	215	96.17
						11	1	248 0	775.02 2
2016-17	1	Chhendipad a			Elephant / Bear	12	31	178 6	565.84
	2	Bantala			Elephant / Bear	0	0	956	230.92
	3	Kaniha			Elephant / Bear	0	0	738	133.63
	4	Talcher			Elephant / Bear	5	0	319 3	564
	5	Jarapada			Elephant / Bear	1	0	398	77.42
	6	Angul			Elephant / Bear	1	0	436	118.12
						19	31	750 7	1689.9 3
2017-18	1	Chhendipad a			Elephant / Bear	10	25	194 0	395.07

	2	Bantala			Elephant / Bear	0	0	782	164.88
	3	Kaniha			Elephant / Bear	1	0	582	112.34
	4	Talcher			Elephant / Bear	7	4	118 1	228.99
	5	Jarapada			Elephant / Bear	1	13	562	98.4
	6	Angul			Elephant / Bear	1	0	298	55.76
						20	42	534 5	1055.4 4
2018-19	1	Chhendipada			Elephant / Bear	9	44	213 3	416.68 8
	2	Bantala			Elephant / Bear	1	0	187 7	466.15
	3	Kaniha			Elephant / Bear	0	0	141 7	266.26
	4	Talcher			Elephant / Bear	6	13	758	170.61
	5	Jarapada			Elephant / Bear	0	26	631	132.65
	6	Angul			Elephant / Bear	2	01	509	124.33
						18	84	732 5	1576.6 9

LOSS OF ANIMAL LIFE

Sl. No.	Vulnerable Place/ Location	Revenue Village	Gram Panchayat	Causing Agent (Railway line/	No. of Incidents	Number of Animal
---------	----------------------------	-----------------	----------------	---------------------------------	------------------	------------------

				Electric transmission lines etc.)		Lives lost
1	Telipada-Bhaukilapal of village Poktunga	NA	NA	3	3	3
2	Tumuni- Teli Taila	NA	NA	NA	NA	NA
3	Banasing KF	NA	NA	NA	NA	NA

FOREST FIRE VULNERABILITY

Sl . N o.	Nam e of the Divis ion	Range	Area (in Ha.	Total Notifie d Forest Area (in Ha.	Hig h Ris k Zo ne (Ar ea in Sq Km)	No. of Reven ue Village s/ habitat ions inside/ adjace nt to the High Risk Zone	Medi um Risk Zone (Are a in Sq. Km)	No. of Village s/ habitat ions inside/ adjace nt to the Medi um Risk Zone	Lo w Ris k Zon es (Ar ea in Sq. Km)	No. of Village s/ habitat ions inside/ adjace nt to the Low Risk Zone
1	Ang ul	Chhendi pada	14403.880	14403.880						

2		Bantala	6433.1 72	6433.1 72						
3		Kaniha	12886. 320	12886. 320						
4		Talcher	8794.1 31	8794.1 31						
5		Jarapada	16229. 185	16229. 185						
6		Angul	14944. 148	14944. 148						
		Total	73690. 836	73690. 836						

CHAPTER -04

NUTITUTIONAL ARRANGEMENT

National Disaster Management Authority (NDMA)

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

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

4.1 National Executive Committee (NEC)

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

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

urban development, water resources and chief of the integrated defence staff of the chief of staffs are other members of NEC.

NDMA (Section 3 to 13)

Constitution (Sec 3 & 4) <ul style="list-style-type: none">• Chairperson : PM (Ex officio)• Other nine members (Nominated by Chair person)<ul style="list-style-type: none">• Vice Chairperson (Nominated by Chair person)	Function (Sec 6) <ul style="list-style-type: none">• Lay down policies• Approve plan (nation & deptt)• Lay down guidelines• Recommend provision of funds• Others.
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NATIONAL EXECUTIVE COMMITTEE

Constitution (sec 8 to 9)

Chairperson: Secy -GOI, DM dept.

<ul style="list-style-type: none">• Other members<ul style="list-style-type: none">• Secy. – Agcl• Secy.- Atomic Energy• Secy.- RWSS• Secy.- Forest & Env• Secy. – Health• Secy.- Power• Secy.- Rural Development• Secy. – Science & tech• Secy.- Space, Tlecomm• Secy.- Urban Devp	Functions (Sec 10) <ul style="list-style-type: none">• Coordinating & Monitoring body for DM• Prepare National plan• Coordinate & Monitor implementation of national plan• Lay down policies• Approve plan (nation & deptt)• Lay down guidelines• Recommend provision of funds
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Section 11 – NDMP <ul style="list-style-type: none">• Measures for Prevention, & mitigation of disaster• Integration of mitigation measures into devp programmes• Measures for preparedness & CB• Roles & responsibilities of Deptt & ministries• Financing measures	Section 12 : Minimum Standard of Relief <ul style="list-style-type: none">• Minimum requirements• Special provisions for destitute• Ex-gratia assistance on account of loss of life or damage of property& restoration of livelihoods.
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4.3 State Disaster Management Authority (OSDMA)

The Odisha 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:-

Lays down policies and plans for disaster management in the State.

- Approves the State Plan in accordance with the guidelines laid down by the NDMA, Coordinates the implementation of the State Plan, recommend provision of funds for mitigation and preparedness measures.
- Review the developmental plans of different departments of the State to ensure the integration of prevention, preparedness and mitigation measures.
- 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.
- Review the measures being taken for mitigation, capacity building and preparedness by the departments of the Government & issue such guidelines as may be necessary.
- Lay down detailed guidelines for providing standards of relief (Not less than the minimum standard of relief in the guidelines of NDMA) to persons affected by disaster in the State.

4.4 State Executive Committee (SEC)

The State Executive Committee (SEC) has been constituted by the State Governments under sub-section (1) & (2) of section (20) to assist the State Disaster Management Authority (SDMA) in the performance of its function and to coordinate action in accordance with the guidelines laid down by the SDMA and ensure the compliances of directions issued by the State Government under the

DM act. The Chief Secretaries of the States are the Chairman of SEC (ex-officio). Four Secretaries of State Government are the other member's ex-officio. The Chairperson of SEC use powers delegated by SDMAs and state Governments. The State Executive Committee shall:-

Coordinate and monitor the implementation of the National Policy, National Plan and State Plan.

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.

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.

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.

STATE DISASTER MANAGEMENT AUTHORITY

Section 14 to 24

Constitution (Sec 3 & 4) <ul style="list-style-type: none"> • Chairperson : CM (Ex officio) • Other eight members (Nominated by Chair person) • Vice Chairperson (CEO) (Nominated by Chair person) 	Function (Sec 6) <ul style="list-style-type: none"> • Lay down policies • Approve plan (State & deptt. & Dist) • Lay down guidelines • Recommend provision of funds • Coordinate the imp of State plan • Review the devp. Plans <p>State Executive Committee</p>
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Section 20 to 24

Constitution (sec 20 & 21) <ul style="list-style-type: none"> • Chairperson: Chief Secy. – Govt. • Other members • Four Secy. to Govt. (All Ex officio) • Can constitute one or more subcommittees 	Functions (Sec 22) <ul style="list-style-type: none"> • Prepare state plan • Coordinate & Monitor implementation of national plan • Lay down policies, guidelines • Evaluate preparedness at all level • Coordinate response • Give direction in the matter of Disaster Management
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Section 23 – SDMP

- Vulnerability profile
- Measures for Prevention, & mitigation of disaster
- Integration of mitigation measures into devp. programme
- Measures for preparedness & CB
- Roles & responsibilities of Deptt & ministries
- Financing measures

Section 12 : Minimum Standard of Relief

- Control vehicular traffic
- Search & rescue operations
- Provide shelter, food, drinking water, & other minimum requirements
- Special provisions for destitute
- Ex-gratia assistance on account of loss of life or damage of property & restoration of livelihoods

3.5 REVENUE AND DISASTER MANAGEMENT DEPARTMENT:

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

4.6 . SPECIAL RELIEF ORGANIZATION.

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

4.7. ODISHA STATE DISASTER MANAGEMENT AUTHORITY (OSDMA).

Odisha State Disaster Mitigation Authority (OSDMA) was established by the Government of Odisha as an autonomous organization vide Finance Department Resolution No. IFC- 74/99-51779/F dated the 28th December 1999 (in the intermediate aftermath of the Super-cyclone in 1999). It was registered under the Societies Registration Act, 1860 on 29.12.1999 as a non-profit making & charitable institution for the interest of the people of Odisha, with its headquarters at Bhubaneswar and jurisdiction over the whole State.

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

- Coordination with the line departments involved in reconstruction,
- Coordination with bilateral and multi-lateral aid agencies,
- Coordination with UN Agencies, International, National and State-level NGOs,
- Networking with similar and relevant organizations for disaster management.

4.6 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

- e) relief in areas affected by such calamities.

4.7 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.

Sl. No	Name Of The Officer	Designation	Position DDMA	Tel. Numbers		
				Office	Residen	Mobile
	Sj. Manoj kumar Mohanty, OAS' S	Collector, Angul	Chairman	230567	230234	9437315326
	Smt Basanti Kishan	President, Zilla Parishad	Member	232475	NA	9437331111
	Mr. Mitrabhanu Mohapatra	Supdt. of Police, Angul	Member	230316	223500	9438916430
	Sj Tapan kumar satapathy	A.D.M., Angul	Member	230491	236052	7978920105
	Sj Atulya Champtiray	P.D., DRDA, Angul	Member	230144	231248	9437000636
	Mr. Baitura Deep	District Emergency Officer, Angul	Member Convenor	230980 234218 1077	230890	9437193651
	Mr. Basudev satapathy	Sub-Collector, Angul	Member	230302	230301	9437225575
	Paramesswar Naik	Sub-Collector, Talcher	Member	240720	240444	9437276663
	Mr. Subash Ch Ray	Sub-Collector, Athamallik	Member	254222	254223	9437230451
	Mr. Ajit Pradhan	Sub-Collector, Pallahara	Member	279221	279222	9437332013
	Dr. Pratap kumar Behera	C.D.M.O., Angul	Member	232507	231302	9439981331
	Dr. Chitaranjan Achryaya	C.D.V.O, Angul	Member	230002	NA	9853123371
	Srikhar Majjhi	C.S.O., Angul	Member	230282	NA	9437335681
	Mr. Sachindana Behera	D.E.O., Angul	Member	230274	NA	9437126757
	Mr. Sarbeswar Bararal	Dist. Fire Officer, Angul	Member	101	231908	8763775200
	Mr. Godabarish Panda	D.F.O. (T), Angul	Member	230322	236442	9437030322
	Mr. Baitura Deep	Secy., Dist. Red Cross, Angul	Member	234679	234679	9438366460

	Mr. Guruva Singh	D.P.O., Angul	Member	231346		9437683898
	Mr. Sarat Ch Sethi	D.I.P.R.O., Angul	Member	230462		9437247757
	Manokj ku satapathy	A.G.M, BSNL, Nalco Nagar	Member	222500	222700	9437334400
	Mr. Umakanta Samantray	Asst. Director, Factories & Boiler	Member	220164	220106	9437686256
	Mr. Dhanayajaya Senapati	R.T.O., Angul	Member	232727		9437212259
	Mr, Samrena Pattainaik	R.T.O., Talcher	Member			9437706584
	Murtunjya Pani	E.E. PHD, Angul	Member	230431	236427	9861130072
	Mr. Suvendu Jena	Exe. Officer, (M), Angul	Member	230582	232041	
		Exe. Officer, Athamallik NAC	Member	254207		
	Ms. Atasi Parida	Executive Officer, Talcher Municipality	Member	240259	240357	9438208548
	Satyajit Sarangi	E.E., CESU Angul	Member	230450	230449	9437094263
	Subrat kumar saho	E.E., CESCO, Chainpal	Member	249050	249080	9437094262
	Suryanarayan Achray	E.E., R & B, Angul	Member	230230	236434	9437961822
		E.E., R.D., Angul	Member	237092	236629	9437255305
	Bikash Ch Das	E.E., RWS & S, Talcher	Member	240762	240772	9438420180
	Er Sarojkanta Mishra	E.E, Irrigation, Angul	Member	236343		9437281979
	Mr. Chouhan	Regional Officer, State Pollution Control Board.	Member			7008768611
		Chief Safety Officer Smelter	Member			
	Mr. Biswarup Basu	GM, NTPC (TTPS)	Member	06730 - 249101		9426445436
	Mr. Mrutunjya Das	GM, NALCO, Smelter	Member	220645		9437061026

		GM, MCL	Member			
	Siba Prasad Mishra	Asst. Labour Commissioner, Angul	Member			9861155925

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*

- The Chief Executive of the District Authority ,ex officio;
- The Superintendent of Police, ex officio;
- The Chief Medical Officer of the district, ex officio;
- 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.

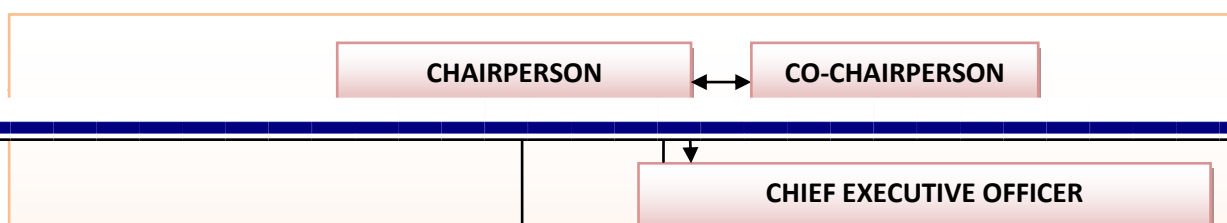
District Disaster Management Authority

Section 25 to 35

Constitution(Sec 25 & 29) <ul style="list-style-type: none"> • Chairperson : District collector (Ex officio) • Co Chairperson: ZP • Other Seven members (Nominated by Chair person) <ul style="list-style-type: none"> • SP • CEO • CDMO Two other Dist. Officer 	Function (Sec 6) <ul style="list-style-type: none"> • Prepare DDMP & DDRP • Coordinate the imp of Nation /State/Deptt. plan • Ensure implementation of policies & guidelines laid down by nation & state • Give direction to sub dist & local authorities for DM
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DISTRICT DISASTER MANAGEMENT COMMITTEE:

The DDMP meeting generally held once in a year. All the dignitary members of DDMA are also the members of Dist. Level Natural Calamity Committee whose meeting conducted twice a year on regular basis. Figure__: Organ gram 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 there for;
- 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 programs and awareness programs 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.

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 in all the phases of disaster management in the district. The Collector is the District Relief Officer and Disaster Manager at the district level and the structure of DLCNC, Angul is as follows:

Table : 4.2

Structure of District Level Committee on Natural Calamities

Sl. No.	Name of the Member	Position in DLCNC	Contact No.
1.	Sri Manoj kumar Mohnaty, OAS (SAG) Collector, Angul	Chairperson	9437315326
3.	Sj. Mahesh Ch Sahoo Hon'ble MP, LS, Dhenkanal	Member	9437040950
4.	Sj Nitesh Ch Gangadev Hon 'ble MP – Sambalpur	Member	9437056336
5.	Sj Rajani Kanta Singh, Hon'ble MLA, Angul	Member	9437028340 /9437022340
6.	Sj. Mukesh Pal Hon'ble, MLA, Pallahalakhara	Member	9178940180
7.	Sj Braj Kishore Pradhan Hon'ble MLA, Talcher	Member	9437155061/ 9437547476
8.	Sj Ramesh Ch Sai Hon' ble MLA, Athamallick	Member	9437043011
	Sj Susanta kumar Behera Hon'ble, Chhendipada	Member	9437451536
9.	Shri Tapan kumar Satapathy, OAS (S) Additional District Magistrate	Member	7978920105
10.	Dr.Pratap kumar Behera Chief District Medical Officer, Angul	Member	9439981331
11.	Mr. Premannda Samal EE – Irrigation, Angul	Member	9437093358
12.	Dr. Chitta Ranjan Acharya , CDVO, Angul	Member	9437273266
13.	Mr, Basudev Satapathy Sub -collector, Angul	Member	7894787369
14.	Mr. Subas Ch Ray Sub-Collector, Athamallick	Member	9437027051
15.	Mr. Ajit Pradhan, Sub -Collector, Pallalahara	Member	9437176906
17.	Mr. Paresh Ch Naik Sub-Collector, Talcher	Member	9437276663-
18	Mr. Baitura Deep District Emergency Officer, Angul	Member Secretary	9437193651

TASK ASSIGNED BY COMMITTEE

The District Disaster Management committee is the apex planning body at the district level and will play a major role in preparedness and mitigation of disaster. A District Disaster Management Committee is formed in the district to assist the Collector in the following steps.

- Reviewing the threat of disasters.
- Vulnerability of the district to different disasters.
- Evacuation process to reduce risk and emergency response.
- Considering suggestions for improvement of the response document i.e. District Disaster Management Plan
- Review of Relief and restoration activities.

4.3 RESPONSIBILITY OF THE COMMITTEE.

- To aware the public on different disasters likely to be happened in the district and educate them regarding the protective measures to face or avoid the disaster.
- To make arrangements for emergency action
- To make necessary plan for evacuation of the people from vulnerable area.
- Rescue and Rehabilitation
- Post disaster management of relief material and taking re-construction work.

4.7 DISTRICT LEVEL COMMITTEE ON NATURAL CALAMITY (DLCNC)

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

Table: Structure of District Level Committee on Natural Calamity

Sl No.	Designation	Name of the Member	Contact No.
1	Collecto & District Magistrate , Angul- Chairman	Sj Manoj kumar Mohanty(OAS (S)	9437315326
2	S.P., Angul	Sri Mitrabhanu Mohaptra (IPS)	9438916430
3	A.D.M. Angul	Tapan Kumar Satpathy ,OAS(S)	9437332013
4	P.D. DRDA, Angul	Atulya Champatyray, OAS, (S)	9437102525
5	Dy. Collector, Emgy.	Shri Baitura Deep, OAS(I)	9437193651
6	LAO General, Angul	Basant Ku. Das, Rtd.OAS	9439557009
7	Sub-Collector, Angul	Sri Basudev Satpathy ,OAS	9437225575
9	Shri Subash Ch ray	Sub-Collector, Athamallik	94370-27051
10	Shri Paresh Chandra Nayak, OAS-I (SB)	Sub-Collector, Talcher	93371-62213
11	Shri Ajit Kumar Pradhan , OAS-I (SB)	Sub Col-Pallahalahra	94371-76906
12	Shri Sarat Chandra Sethi	DIPRO	9437247757
13	Mr. Baitura Deep	District Emergency Officer	9437193651
14	Mr. Suresh Ch Sahoo	CDVO, Angul	9853123371
15	Dr. Pratap kumar Behera	CDMO, Angul	9439981331
16	Mr. Srikar Majhi	CSO, Angul	9437335681
17	Mr. Sachindanada Behera	District Education Officer	9437126757
18	Mr. Sarbeswar Baral	District Fire Officer	9861687881
19	Er. Dhananjaya Senapati OTES-II	RTO, Angul	9437212259
10	ER. Samrenra Pattnaik	RTO, Talcher	9437706584
11	Murtunja Pani	EE-PHED	9861130072
12	Krupasindhu Nayak	DSWO	9437085748
13	Dr. Laxmi Naryan Bisoi	ADMO	9439981253

14	Mr. Naredra kumar Sahoo	Deputy Director Horticulture	9438107196
16	Basant kumar Panigrahy	DWO, Angul	9937391580
17	Godabarish Panda	DFO (T)	9437030322
18	S.N.D.T Rehman	DFO (WL)	8280146664
19	P.K. Mohapatra	DFO (KL)	9437198041
20	Premananda Samal	EE MI, Angul	9437093358
21	Santosh kumar Mishra	EE-LI, Angul	9938310987
22	Bikash Ch Das	EE, RWSS, Talcher	9438420180
23	Satyajit Sarangi	EE-CESU	9437094263
24	Subrat kumar sahu	EE-CESU, Chainpal	9437094262
25	Suryanarayan Achray	EE –R&B	9437961822
26	Mr.Bichitrananda Nayak	Tahsildar, Angul	97760-01757
27	Shri Jitendra Kumar Sahoo	Tahasildar, Banarpal	94377-36600
28	Shri Daniel Ekka	Tahasildar, Chhendipada	9178370181
29	Shri Ansuman Satpathy,OAS	Tahasildar, Kanhia	94373-24353
30	Sri Basudev Mohapatra,	Tahasildar, Athamallick	9337389745
31	Dr. L. K Sahoo	Tahsildar, Kishorenagar	97772-23250
32	Sri Mayadhar Behera,OAS(JB)	BDO, Angul	94372-00793
33	Dr. Swarupananda Sahu	BDo, Banarpal	94390-09816
34	Sri Romanchal Khamari,OAS	BDO, Chhendipada	99372-74006 828040-5021
35	Shri Ramesh Kumar Jena,OAS	BDO –Kanhia	99370-64038
36	Sri Netrananda Mallik, OAS BDO, Talcher	BDO, Talcher	94372-60489 828040-5025

37	Sri Rahas Ch. Naik,(I/C) ABDO, Athamallik.	BDO –Athammalik	94370-75106 828040-5019
38	Shri Amruta Priyabada,	BDO –Kishorenagar	88959-36640 828040-5023
39	Sri Tribikram Kumura BDO, Pallahara	BDO –Pallalahara	99385-81873 828040-5024

Other Disaster Management Groups in Angul district are as follows :

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. All the Tahasildars and Block Development Officers should form the Quick Response Team at Block and Panchayat Level. The suggested strictures of Team to be formed in the flood/disaster prone areas as follows.

Table : 4.3
Structure of Block Level Quick Response Teams

1.	Chairperson of the Block or Municipality	Chairman
2.	Tahasildar & BDO of the Area	Co-Chairpersons
3.	IIC of the PS & AE, RWS&S	Members
4.	MO, CHC/PHC & VAS	Members
5.	CDPO & Marketing Inspector	Members
6.	Executive Officer (in case of Urban)	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 & Secretary of Local Club	Members
6.	All the Ward Members	Member

4.9 National Disaster Response Force (NDRF)

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

Table-25 :
Location of National Disaster Response Forces

SI No.	Battalion, Location	State	Man power drawn from	Contact Person	Contact No.
1	01 Bn, NDRF, Guwahati	Assam	BSF	Sh. S. K. Shastri Commandant	09401307887 0361-2840027
2	02 Bn, NDRF, Kolkata	West Bengal	BSF	Sh. NitishUpadhyay Commandant	09434742836 033-2587503

SI No.	Battalion, Location	State	Man power drawn from	Contact Person	Contact No.
3	03 Bn, NDRF, Munduli	Odisha	CISF	Mr. M.K. Yadav Commandant	9437964571 0671-2879710
4	04 Bn, NDRF, Arakkonam	Tamil Nadu	CISF	Ms. Rekha Nambiyar Commandant	09442105169 04177-246269
5	05 Bn, NDRF, Pune	Maharashtra	CRP F	Sh. Anupam Srivastava Commandant	09423506765 02114-247010
6	06 Bn, NDRF, Gandhinagar	Gujarat	CRP F	Sh. R. S. Joon Commandant	09428826445 079-23202540
7	07 Bn, NDRF, Ghaziabad	Uttar Pradesh	ITBP	Commandant	0164-2246195
8	08 Bn, NDRF, Bhatinda	Punjab	ITBP	Sh. P.K. Srivastava Commandant	09968610014 0120-2766013
9	09 Bn, NDRF, Patna	Bihar	BSF	Shri Vijay Sinha Commandant	07762884444 06115-253942
10	10 Bn, NDRF, Vijayawada	Andhra Pradesh	CRP F	Sh. Parshant Dar Commandant	07382299621 0863-2293178
11	11 Bn, NDRF, Varanasi	Uttar Pradesh	SSB	Sh. A.K. Singh Commandant	09455511107 0542-2501201
12	12 Bn, NDRF, Itanagar	Arunachal Pradesh	SSB	Sh. Angom Kiran Chand Singh Commandant	09485236141 03621-242940

4.10 Odisha Disaster Rapid Action Force (ODRAF)

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

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

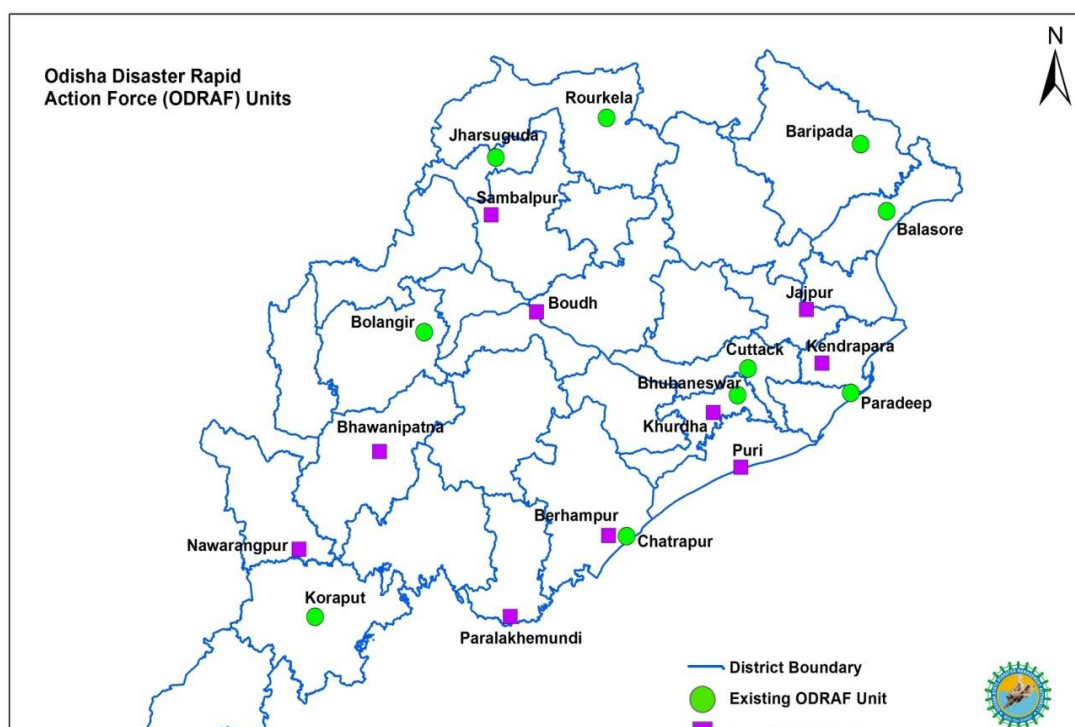
Table- 26 : Location of Odisha Disaster Rapid Action Force with contact details

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, spjsp.odpol@nic.in

7.	OSAP 7th Battalion, Bhubaneswar	200 8- 200 9	Khurdha	44	Phone: 0674-2301055 (O),2303426 (R),Fax: 0674 -2301055 comdt7thbn.odpol@nic. in
8.	OSAP 5th Battalion, Baripada	200 8- 200 9	Mayurbhanj	40	Phone: 06792-278232 (O), 254402 (R) Fax: 06792- 278232 comdt5thbn.odpol@nic. in
9.	APR Bolangir District	200 8- 200 9	Balangir	43	Phone: 06652-232020 (O) -133063 (R) Fax: 06652- 232375 spbgr.odpol@nic.in
10.	OSAP 4th Battalion, Rourkela	200 8- 200 9	Sundergarh	46	Phone: 0661- 2600980(O), 2600434 (R) Fax: 0661-2600980 comdt4thbn.odpol@nic. in
11.	IR Battalion, Boudh	201 5- 201 6	Boudh	47	Phone: 06841-222238 7684872156 (M) 9437232275 (M) comdt5thirbn.odpol@ni c.in
12.	4th IR Battalion, Deogarh	201 5- 201 6	Deogarh	52	Phone: 0664-3242130 (O),comdt4thirbn.odpol @nic.in
13.	OSAP 1st Battalion, Dhenkanal	201 5- 201 6	Dhenkanal	46	Phone: 06762- 226229 (O), 06762- 226291 (CR) Fax: 06762-226291 comdt1stbn.odpol@nic. in
14.	OSAP 8th Battalion, Chhatrapur	201 5- 201 6	Ganjam	48	Phone: 06811- 260375 (O), Fax: 06811- 254011 comdt8thbn.odpol@nic. in
15.	3rd IR Battalion, Kalinganagar	201 5- 201 6	Jajpur	49	Phone: 0672- 6244602 (O), 0672- 6244610 (CR) Fax: 0672- 6244610 comdt3rdirbn.odpol@ni c.in

16.	8th Special IR Battalion, Kandhamal	201 5- 201 6	Kandhamal	43	Phone: 06842-2533017 (O),8763616282 (M) comdt8thsplirbn.odpol@nic.in
17.	6th IR Battalion, Khurda	201 5- 201 6	Khurda	50	8895856633 (M) comdt6thirbn.odpol@nic.in
18.	1st IR Battalion, Upper Kolab, Koraput	201 5- 201 6	Koraput	43	Phone: 06852- 252167 (O), 06852-211320 (CR) comdt1stirbn.odpol@nic.in
19.	7th Special IR Battalion, Upper Kolab, Koraput	201 5- 201 6	Koraput	44	Phone: 06852- 251067(O), 06852-229007 (CR) comdt7thsplirbn.odpol@nic.in
20.	2nd IR Battalion, Bhamini, Angul	201 5- 201 6	Angul	48	Phone: 0658-725110 (O), Fax: 0685- 725110 (CR), comdt2ndirbn.odpol@nic.in

Map__ : Location of ODRAF Units



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 HR/ Volunteers
1.	District Police	Mr. Mitrabhanu Mohapatra	S.P., Angul	9438916430		145
2.	Home Guards	Mr, Susnata kumar sahu	RI in Charge	98536384506		
3.	ODRAF		Commandant, 2 nd IRB,			
4.	Fire Service	Mr. Sarbeswar baral	AFO	9861687881		
5.	National Cadet Corps	Lt Abhimanyu Das	Commanding Officer	7978702661		
6.	Nehru Yuva Kendra	Mr. Susnata kumar Tripathy	District Youth Coordinator	9556263135		3
7.	Youth Red Cross		Unit Head		-	
08	NGO	Mr. Bibhu Prasad	Chief Executive	9437441552		8
09	VO (Voluntary Organization)	Mr, Motiram jena	Staff	9437146209		7
10	Civil Defence	NA	NA	NA		NA

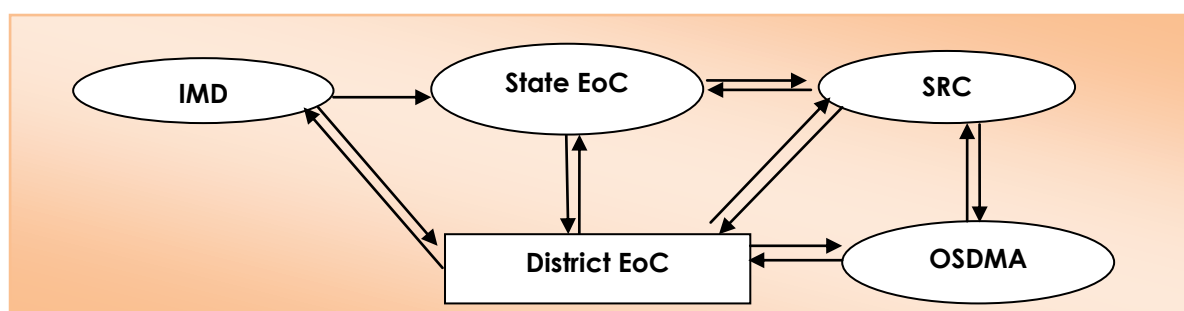
FLOOD SHELTER MAINTENANCE & MANAGEMENT COMMITTEE (FSMMC)

Flood Shelter maintenance & Management committee (FSMMC) has been formed at each Flood shelter level for the maintenance & management of the shelters. The committee is a mix of official members, PRI representatives & community representatives such as Local BDOs, Local Tahasildars, Local Medical Officers, EO of GPs, local ANM, AWW , local Sarapanch , concerned ward member & community volunteers and representatives of NGOs etc. Local Sarapanch will be act as present & one community representative will work as Secretary of the committee for its smooth functioning.

State Emergency Operation Centre (SEOC)

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

Figure___: Information flow chart from SEOC to Districts



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. of Police, Odisha	Member
13.	D.G., 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, Gol)	Member
20.	Regional Director, Mines Safety (DGMS, Bhubaneswar, Gol)	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

Date of Constitution of District Crisis Group formed in the district on the date of 20.06.2000, the chairman of this group is District Magistrate, Collector of the district, each year the DCG meeting organized twice to know the preparedness measures taken by the different stakeholders, industries & officers to tackle the crisis in the district.

Table : 4.13
Composition of District Crisis Group

Sl. No.	Member	Designation
1.	Collector & District Magistrate, Angul	Chairperson
2.	Assist. Director of Factories & Boilers, Angul	Member Secretary
3.	Superintendent of Police, Angul	Invited Member
4.	Additional District Magistrate, Angul	Member

5.	Sub- Collector, Angul	Member
6.	District Emergency Officer, Angul	Member
7.	RTO, Angul	Member
8.	Tahsildar, Angul	Invited Member
9.	General Manager, D.I.C., Angul	Member
10.	Fire Officer, Angul	Member
11.	Chief District Medical Officer, Angul	Member
12.	Regional Officer, O.S.P.C.B., Angul	Member
13.	Sub-Collector, Gunupur	Member
14.	DLO, Angul	Invited Member
15.	Block Development Officer, Angul	Invited Member
16.	Block Development Officer, Angul	Invited Member
17.	CSO, Angul	Member
18.	Executive Engineer, GRIDCO, Angul	Member
19.	DPO, DDMA, OSDMA, Angul	Member
20.	District Information & Public Relation Officer, Angul	Member
21.	Controller of Explosive, Rourkela	Member
22.	Chief, Civil Defence	Member
23.	Working President, J.K. Paper Mills Workers Union	Member
24.	Dy. Superintendent of Police, Angul	Member
25.	Executive Officer, Angul Municipality	Member
26.	Sub-Divisional Officer, PHD, Angul	Member
27.	District Agricultural Officer	Member
28.	Chief Executive (Works), Nalco	Member
29.	Chief Safety Officer, Nalco	Member
30.	Chief Medical Officer, Nalco	Member
31.	Sr. General Manager, NTPC, Kanhia	Member
32.	Chief Safety Officer, IMFA Ltd., MCI	Member
33.	Sr. General Manager, MCL	Member
34.	Chief Safety Officer, NTPC, Kanhia	Member
35.	Chief Executive (Works), NTPC Kanjia	Member
36.	Factory Manager, Jindal Company	Member
37.	Factory Manager, M/s.	Member
38.	Safety Officer, M/s.	Member
39.	RTO, Talcher, Angul	

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.

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

DISTRICT EMERGENCY OPERATION CENTERS (DEOC)

Emergency Operation Centre

A fully functional control room runs at the Dist. Headquarter round the clock. Staffs of different department under the Collectorate assigned for the duty 24 x 7. Equipment like Shaw cutter, live boy, live jacket, polythene, Sat light phone, high max light and generators etc. are available in Dist. Emergency Centre.

Communication and Mechanism

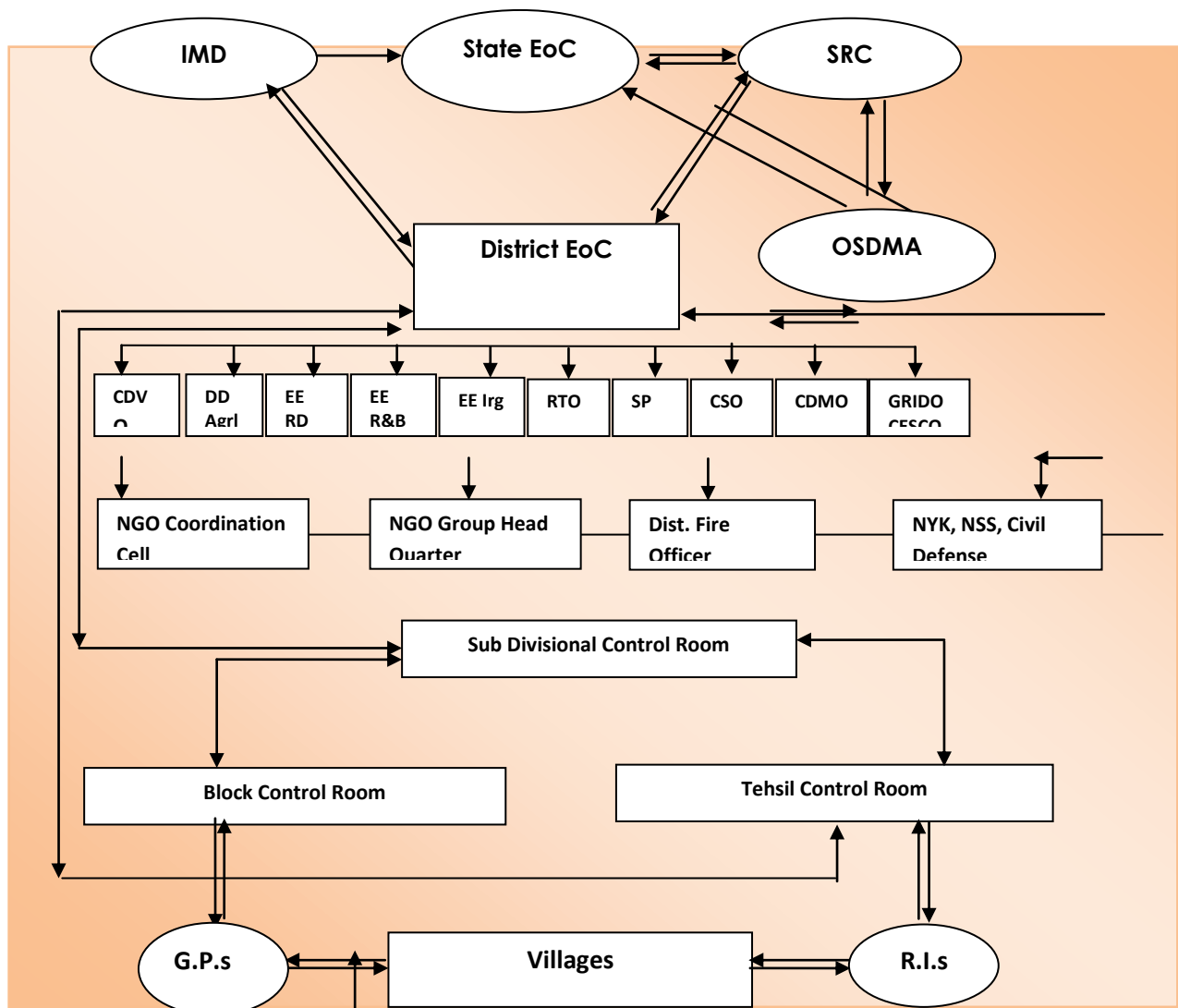
A toll free number 06764-234218 (1077) is working under the Control room.

Table: 3
Equipments provided to DEoC and their operational status

SI No.	Equipments	Unit	Status		Remarks
			Operational	Non-Operational	
1	Desktop Computer	02	Yes		
2	Laser Printer	01	Yes		
3	UPS	02	Yes		
4	Scanner	01	Yes		
5	Fax	01		No	
6	Ink Jet Printer	01			
7	Multi Utility Machine (Printer, Scanner, Fax, copy)	1	1		
8	Laptop	--			
10	LCD Projector	01	Yes		
11	Photocopier	--			
12	GPS Unit	--			
13	Satellite Phone	01	Yes		
14	VHF Sets	01		No	
15	VHF Mobile Station	--			
16	Walkie-Talkie (VHF hand Set)	Nil		No	
17	Portable Diesel Generator	01	Yes		
18	Inverter with Battery	01	Yes		
19	Inflatable Tower Light	02	Yes		
20	Power Saw	02	Yes		
21	Life Jacket	02	Yes		
22	Life Buoy	02	Yes		
23	Aluminum Ladder	--		No	
24	Fire Extinguisher	Nil		No	
25	Siren	01	Yes		
26	Megaphone	01	Yes		
27	Colour TV/Stand	01	Yes		

28	Mobile Phone	02		No	
29	Display Board				
30	White Broad	01	Yes		
31	Computer Table/Chair	02/02	Yes		
32	Rack	01	Yes		
33	Book Case	01	Yes		
34	GI Trunk	01	Yes		
35	Commando Search Light				
36	Steel Almirah	01	Yes		

Figure__ : Information flow chart from District Emergency Operation Center (DEoC) to Villages with early warning

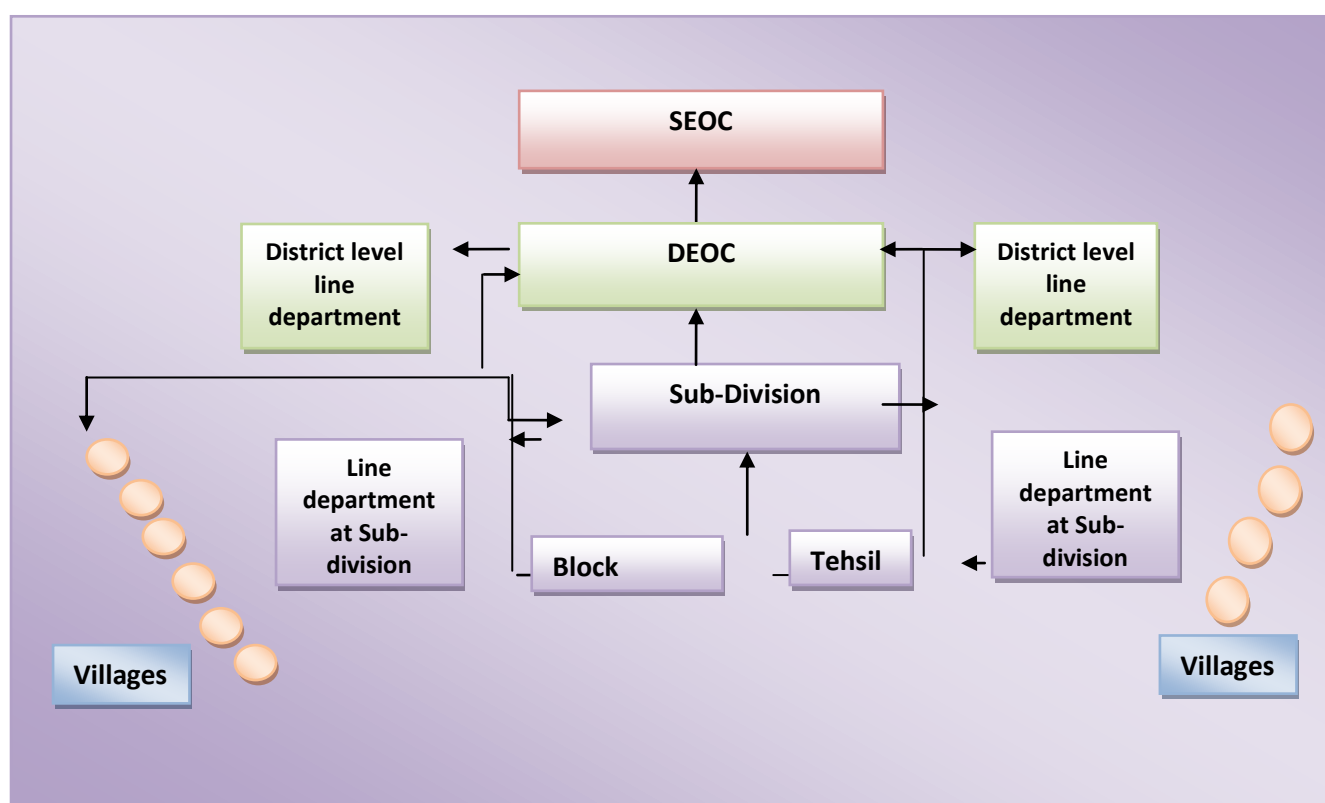


Key Line Departments at the District

Sl. No.	Department	Head of the Department at District	Name of the Nodal Officer
1.	R&DM	Collector& DM	Mr. Manoj kumar Mohanty, OAS(S)

2.	Home	Superintendent of Police	Mr. Mitrabhanu Mohanpatra, IPS SDPO, Angul
3.	Home	Asst. Fire Officer	Mr. Saerbeswar Baral
4.	Health & FW	CDM& PHO	Dr. Sukant Patra
5.	ARD	CDVO	Dr.Achraya
6.	PR&DW	EE	Asst. Executive Engineer
7.	H&UD	EE	Asst. Engineer

Figure__ : Information flow chart from Villages to District Emergency Operation Center (DEoC) without early warning



4.1 DISTRICT DISASTER MANAGEMENT COMMITTEE:

Sl. No	Designation		Tel. Numbers		
			Office	Residenc	Mobile
1.	Collector, Angul	Chairman	230567	230234	9437315326

2.	President Zilla Parishad	Member			9437331111
3.	Supdt. of Police, Angul	Member	230316	223500	9438916430
4.	A.D.M., Angul	Member	230491	236052	9437332013
5.	P.D., DRDA, Angul	Member	230144	231248	9437102525
6.	District Emergency Officer, Angul	Member Convenor	230980 234218 1077		9437193651
7.	Sub-Collector, Angul	Member	230302	230301	9437228689
8.	Sub-Collector, Talcher	Member	240720	240444	9437276663
9.	Sub-Collector, Athamallik	Member	254222	254223	9473027051
10.	Sub-Collector, Pallahara	Member	279221	279222	9439277260
11.	C.D.M.O., Angul	Member	232507	231302	9439981331
12.	C.D.V.O, Angul	Member	230002		9938679287
13.	C.S.O., Angul	Member	230282		9437335681
14.	D.E.O., Angul	Member	230274		9437126757
15.	Dist. Fire Officer, Angul	Member	101	231908	8763775200
16.	D.F.O. (T), Angul	Member	230322	236442	9437030322
17.	Secy., Dist. Red Cross, Angul	Member			9438366460
18.	D.P.O., Angul	Member	231346		
19.	D.I.P.R.O., Angul	Member	230462		9437247757
20.	A.G.M, BSNL, Nalco Nagar	Member	222500	222700	
21.	Asst. Director, Factories & Boiler	Member	220164	220106	9437686256
22.	R.T.O., Angul	Member	232727		9437212259
23.	R.T.O., Talcher	Member			9437063914
24.	E.E. PHD, Angul	Member	230431	236427	9861130072
25.	Exe. Officer, (M), Angul	Member	230582	232041	9438307959
26.	Exe. Officer, Athamallik NAC	Member	254207		9861513604

27.	Executive Officer, Talcher Municipality	Member	240259	240357	9437112693
28.	E.E., CESCO, Angul	Member	230450	230449	9437094262
29.	E.E., CESCO, Chainpal	Member	249050	249080	9437094263
30.	E.E., R & B, Angul	Member	230230	236434	9437961822
31.	E.E., R.D., Angul	Member	237092	236629	9437255305
32.	E.E., RWS & S, Talcher	Member	240762	240772	9438420180
33.	E.E, Irrigation, Angul	Member	236343		9437382746
34.	Regional Officer, State Pollution Control Board.	Member			9437278372
35.	GM, NALCO, Smelter	Member			9437061026
36.	Asst. Labour Commissioner, Angul	Member			9861155925

The DDMP meeting generally held once in a year. All the dignitary members of DDMA are also the members of Dist. Level Natural Calamity Committee whose meeting conducted twice a year on regular basis.

Emergency Operation Centre

A fully functional control room runs at the Dist. Headquarter round the clock. Staffs of different department under the Collectorate assigned for the duty 24 x 7. Equipment like Shaw cutter, live boy, live jacket, polythene, Sat light phone, high max light and generators etc. are available in Dist. Emergency Centre.

Communication and Mechanism

A toll free number 06764-234218 (1077) is working under the Control room.

CDMC: -City Disaster Management Committee:

In each City / Municipality, there shall be a Disaster Management Committee which will oversee all activities in disaster management. The ULB will also constitute a City Disaster Management Team consisting of officials and non-officials and organize training for them to be able to discharge their duties properly.

Block Emergency Operation Centre (BEoC)

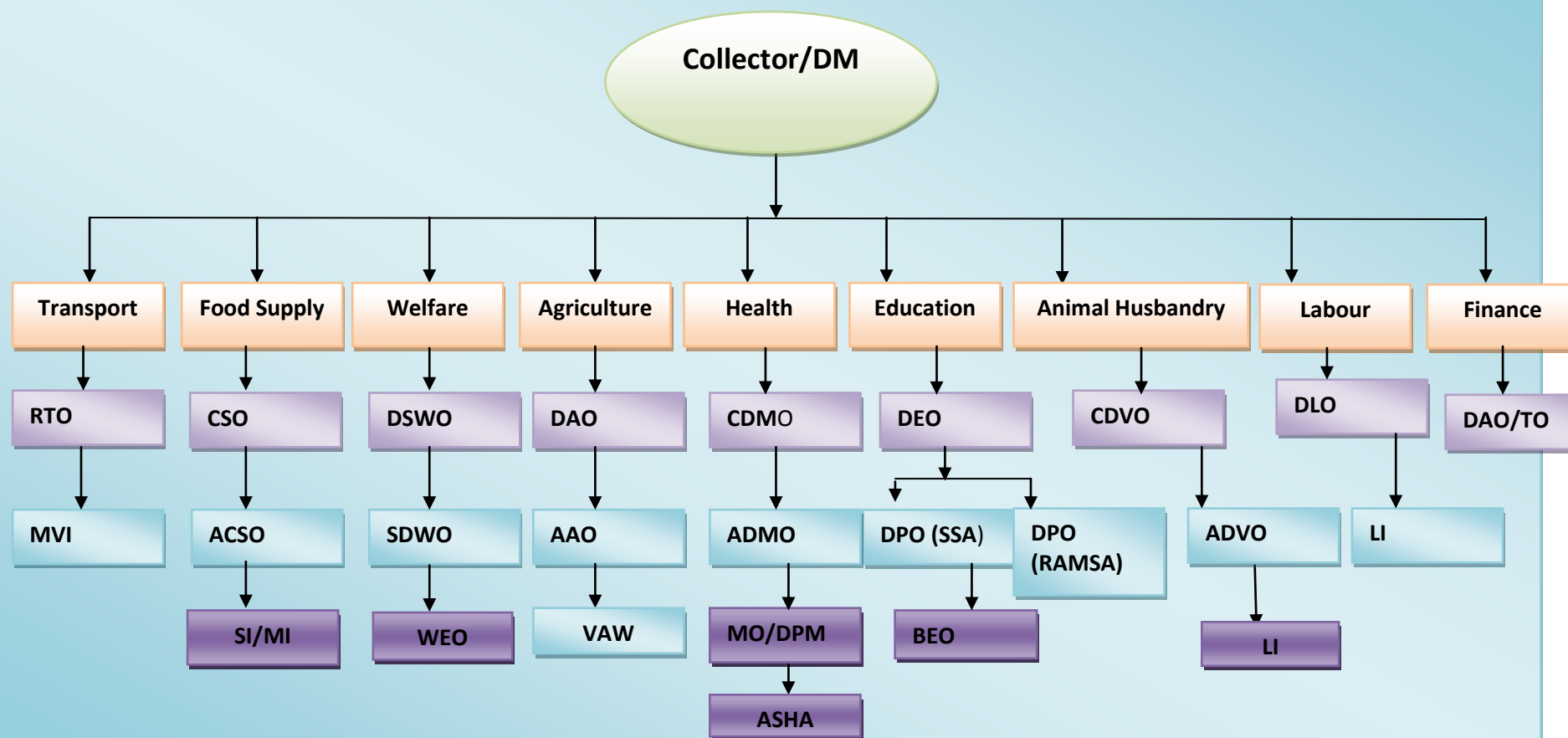
Block level Disaster Management Committees will be constituted and will be headed by BDO as the case may be Officers from different departments and representatives of local Panchayat body will be members of this Committee. The Committee will look into all the aspects of disaster management including mitigation preparedness, response and relief. Following member is club in BDMC.

Table Important Line Departments at the Block

	Sub-Collector, Angul	Sri Basudeb Satpathy OAS	9437228689
	Sub-Collector, Talcher	Parmaeswar Naiik	9437276663
	Sub-Collector, Athamalik	Subash Ch Ray OAS	9178980928
	Sub-Collector, Pallahara	Mr. Ajit Pradhan	9437210795
	BDO, Angul	Mayadhara Behera	94372-00793
	BDO, Banarpal	Swaraupnanda Sahoo OAS I/C	94390-09816
	BDO, Athamallik	Sanjaya kumar Achraya	94370-75106
	BDO, Chhendipada	Romanchala Khamari	99372-74006 828040-5021
	BDO, Talcher	Netrananda Mallick	99370-64038
	BDO, Kaniha	Ramesh Ch Jena	99370-64038
	BDO, Pallahara	Tribikram Kumura	99385-81873 828040-5024
	BDO, Kishorenagar	Amruta Priyambada	88959-36640 828040-5023
	Tahsildar, Angul	Mr.Bichitrananda Nayak	97760-01757
	Tahasildar, Banarpal	Shri Jitendra Kumar Sahoo	94377-36600
	Tahasildar, Chhendipada	Shri Daniel Ekka	9178370181
	Tahasildar, Kanhia	Shri Ansuman Satpathy,OAS	94373-24353
	Tahasildar, Athamallick	Basudev Mahapatra	9337389745
	Tahsildar, Kishorenagar	Dr. Laxmikanta Sahoo	97772-23250
	Tahsildar, Talcher	Sachidanada Nayak	8018242966

	Tahasildar, Pallaharla		
	SDH-Pallalahara	Dr. Jayakrushna Nayak	94389981891
	SDH-Athamallick	Dr. Kasturi Mishra	7326884919
	SDH Talcher	Dr. A.K Behera	9439982762
	CHC Chhendipada	Dr. Mahamilan Murmu	9937397427
	CHC Madhaupur	Dr. Sunil kumar Panda	9437242753
	CHC -Bantala	Dr. Ghanashyam Behera	9439982762
	CHC Banarpal	Dr.Swapneswar Behera	9439982933
	CHC Godibandha	Dr. Soumya Ranjan Pal	9439981835
	CHC R K Nagar	Dr. Priyabrat Das	9439981940
	CHC Kosala	Dr. Dhiren Pradhan	9439981940
	CHC Khamar	Dr. Bharatbhusan Jena	9439981909
	CHC -Kanhia	Dr. Sumant Patel	9437943352
	Block Education Officer- Angul	Mrs. Loipamudra Pattnaik	9583268386
	Block Education Officer- Taclher	Mr. Sunil mundu	9437072607
	Block Education Officer- Kanhia	Khageswar Behera	9937979639
	Block Education Officer- Banarpal	Lalita mohan sahuo	6372261487
	Block Education Officer- Athamallick	Nabakishore Pradhan	9556695442
	Block Education Officer- Kishorenagar	Pradeep kumar Rath	8328820485
	Block Education Officer- Pallalahara	Chiita Ranjan Parida	9437904653

4.13 COORDINATION STRUCTURE AT THE DISTRICT LEVEL AND DOWN THE LINE



4.14 GO-NGO COORDINATION BEFORE AND AFTER DISASTER IN THE DISTRICT .

Disaster Management, Disaster Reduction can be Successful achieve at district level to Village level with proper coordination between GO & NGO (Civil Societies) This can be possible with proper utilisation of combine knowledge, technology, expertise, institutional capacities, management skills, and practical experience for optimum results, which would not be possible without proper collaboration between the two key players District (DDMA) and civil society. The District Administration can effectively link up knowledge, technology, skills, resources, expertise offered by specialist institutions with grassroots experience, organisational capacity, participatory management skills, and community based initiatives of NGOs for disaster reduction. The role of NGOs assumes significance in view of their wider engagement in civic and development initiatives. Over last few decades, NGOs have become important players in the development process across the state subsequently at district level in different development programmes engaged in wide ranging activities starting with community development to training, policy research, and advocacy. Their organisational flexibility, informal work style, and close engagement with grassroots communities enable them to deliver services to people at lower costs. They supplement government initiatives by acting as a conduit between development programmes and beneficiaries, their ability to mobilise people and understand people's concerns enables them to better articulate problems encountered by people. Today, NGOs play an important role in disaster response and mitigation in different regions.

Rationale for stronger GO-NGO collaboration for disaster reduction Replicating micro-level initiatives:

The community-focussed approach, which is the main strength of NGOs, can be a limitation without conscious efforts to replicate successful micro-level initiatives for wider impact. This can be achieved only through continuous dialogue and engagement between state and NGOs, which would create greater understanding amongst them and facilitate policy changes for replication of micro-level experiments.

Optimal use of resources.-

In Concern to our district , where limited resources, logistic and infrastructure facilities cause many problems, optimal use of available financial and human resources, organisational energies and support systems is a must for timely disaster response and effective disaster reduction measures. This can't be achieved without effective GO-NGO partnership.

Check Overlapping, Duplication, & Confusion.-

Timely response to natural disasters remains a difficult task in Districts, where a majority of people live in dispersed rural settlements with inadequate communication facilities. Involvement of multiple actors, especially NGOs, makes it possible to reach humanitarian aid to marooned victims and initiating restoration work in cut-off zones. However, without coordination, such engagement of

NGO, Collaboration among NGOs of district in Disaster Reduction and Response could check the duplication, over lapping, and confusion. Adequate coordination of efforts made by govt. and NGOs can only ensure proper sharing of responsibility in the disaster response process.

Supplement Govt's Response with Sector-focused Initiatives.

Experience in District and in other parts of Districts shows that NGO focus on sector-specific issues such as livelihood, community organisation, community asset creation, women group formation, etc. accelerates social and economic recovery after disasters. Such initiatives meaningfully supplement larger infrastructure reconstruction initiatives of the government. Similarly, while the state follows a universalistic approach in supporting victims, NGOs could adopt a community-oriented approach and cater to needs of vulnerable groups who otherwise find it hard to cope with the impact of disasters.

Strengthen Community-Based Disaster Preparedness.

In Respective to our district poverty and low awareness explain higher human casualty and deeper adverse impact of disasters. Techno-intensive solutions for disaster response and reduction are hard to adopt in view of higher economic costs and uncertainties surrounding their adaptability to local socio-cultural situations. Success of disaster preparedness in such contexts depends more on effective community-based approaches to risk reduction and management, in which NGOs have a bigger role to play. In brief, without proper collaboration between Government and NGOs, initiatives in disaster response, mitigation, and reduction will not bear any fruit. There is always a strong co-relationship between successful project implementation and effective GO-NGO collaboration. The experience of GO-NGO collaboration for disaster response in District should serve in putting the issue in a broader perspective.

Advocacy:

NGOs are powerful advocacy institutions and would collaborate with the Government in reviewing various sectoral policies to ensure that Disaster Preparedness concerns are addressed. NGOs may develop an advocacy plan envisaging the opportunities for investing in preparedness activities and take up with the district administration, Panchayati Raj Institutions, District level elected representatives and Corporate for mobilising resources for disaster preparedness interventions. Such advocacy may facilitate policy formulation, strategy development and programme design at different levels towards disaster preparedness.

Assessment:

NGOs may contribute in initiating Participatory Assessment of Disaster Risk (PADR) processes at the community level to assess the vulnerabilities and risks to various hazards in their respective areas of operation. The process may also identify available resources and capacities within the community to overcome vulnerabilities and address risks. Members of the PRI and the district level elected

representatives would be involved in these processes. The NGOs may also facilitate documenting the findings of the assessments and provide the information to the district administration for joint planning measures, which would lead to better integration of initiatives in the District Disaster Management Plans(DDMPs).

Capacity building:

NGOs may build the capacities of the community (Disaster Management Committees & Taskforces) and other government officials at district and state level to undertake activities in various thematic areas which will result in the integration of the same in the Disaster Management or other departmental plans and may also facilitate preparation of the Plans by involving the local communities and the Panchayat Raj Institutions.

(d) Knowledge Management: NGOs may play an important role in generating awareness and building capacity on Disaster Management at various levels

Coordination & Partnership:

NGOs will have dialogue with Government counterparts to develop coordination mechanism at different levels. NGOs may also promote exchange of information and coordination with all stakeholders concerned with the aim of fostering a holistic approach towards disaster preparedness.

NGOs may promote regular disaster preparedness exercises in coordination with the Government Stakeholders, with a view to ensuring rapid and effective disaster response. NGOs may facilitate GO-NGO coordination platforms at the state and district levels as well.

NGOs may facilitate establishment of modalities with Panchayat Raj Institutions/ District administration to endorse or validate beneficiary lists, especially in cases where disasters have destroyed family documents, such as BPL cards, ration cards and other identity cards, in order to ensure no exclusion takes place and the most vulnerable are provided assistance.

NGOs in collaboration with the district administration may organise joint consultations with the community members, elected representatives and the PRI members to strengthen the preparedness capacities of the community. Subsequent to the consultation, NGOs may facilitate formation of Disaster Management Teams from among the community members and assist in linking them with the PRIs and the district administration. Based on the local context, the DM teams may be formed on early warning dissemination, search and rescue, first-aid(public health), shelter maintenance, water and sanitation, relief and coordination, carcasses disposal, psycho-social support and damage assessment.

NGOs may also facilitate appropriate representation of women in each of the DM teams.

NGOs in coordination with the District Administration may organise mock drills to strengthen the understanding of the DM Teams with regard to their role in preparedness.

As part of the DM plan, NGOs in coordination with Local Government may support the communities to prepare disaster specific Standard Operating Procedures (SOP) to be followed during disaster situations at the community level.

NGOs may help the DM teams familiarise with the SOPs and the households, with the household preparedness checklist by conducting periodic mock drills jointly with the district administration.

Roles and Responsibilities: Roles to be played by NGOs at the community, district, state and National levels with respect to the key components are illustrated below.

Key Components	Roles	Key Actions	NGOs to facilitate and support	Community Level	District Level	State Level	National Level	Institutional arrangements

Mobilise and organize community from village/local disaster management committees (VDMC). –

Help VDMCs get institutionalised by regular Disaster preparedness (DP) planning, documentation efforts VDMCs form Task Forces to work on specific needs and issues.

Participate in district level task forces, EOC level meetings -advocate for establishment of DDMA-NGO Advisory Committee, and assist in preparing inclusive DDMPs;

assist in social equity audits at various levels, as worked out by the authority Participate in State level task forces, EOC level meetings. –

NGOs mobilise and organize inclusive Interagency Group (IAG) -Advocate for establishment of SDMA-NGO Advisory Committee Participate in National level NGO and other task forces.

Advocate for formal and institutionalized engagement and develop protocols for consultation with NDMA, ,National Executive Committee, SDMA, State Planning Boards, State Executive Committees and such other bodies, including nodal ministries /departments /agencies, on mainstreaming disaster management concerns Coordination Mechanisms Establishment of community level coordination mechanisms with frontline workers, panchayat and their link with block and district level linedepartments.

Assist in developing and participating in district level GO- NGO and Inter Agency Coordination Mechanisms Assist in developing and participating in state level GO- NGO & Inter Agency Coordination mechanisms.

Assist in developing and participating in GO- NGO Inter Agency Coordination mechanisms

Participate in GONGO Advisory Committee Contingency Planning contingency planning at community levels Assist in development, piloting, and validation and updating of the district level contingency and preparedness plans

Assist in development, piloting, validation and updating of the state level disaster management plans

Assist in development of the National level contingency and preparedness plans Capacity Needs Analysis and Standardized Capacity building Detailed assessment of current needs and capacities at community level

Training, Simulation and mock drills Conducting vulnerability mapping exercises with the community to know the areas of intervention by the GO-NGO collaboration in the field Training of community volunteers and linking them with the local administration to act in the event of disaster.

- Facilitate detailed assessment of current needs and capacities at district levels
- Facilitate Training and mock drills of different stakeholders
- Facilitate detailed assessment of current needs and capacities at state levels
- Facilitate and participate in Training and mock drills of different stakeholders
- Facilitate detailed assessment of current needs and capacities at national level
- Facilitate and participate in Training and mock drills of different stakeholders Hazard Monitoring, Forecasting and Early Warning (EW) Establish linkages with stakeholders for hazard monitoring and provide last mile connectivity for EW dissemination
- Establish linkages with multiple stakeholders for hazard monitoring and provide last mile connectivity for EW dissemination Establish linkages with authorities for hazard monitoring and provide last mile connectivity for EW dissemination Establish linkages with authorities for hazard monitoring and provide last mile connectivity for EW dissemination of Information & Knowledge Management and communication
- Facilitate and support mechanisms for information dissemination before, during and after disasters Collect, Manage, Process and share Data during and after disaster
- Research, develop, document and disseminate best practices, including traditional coping strategies for replication and scale up Facilitate mechanisms for public information dissemination before during and after disasters
- Collect, Manage and Process Data during and after disaster
- Research, develop, document and disseminate best practices for replication and scaling up Facilitate, support and establish mechanisms for information dissemination before, during and after disasters Collect, Manage and Process Data during and after disaster
- Research and promote best practice development / adoption

- Facilitate and establish mechanisms for public information broadcasting before and during disasters Collect, Manage and Process Data during and after disaster

Role of Corporate Sector in the district relating to Disaster Management

Role of Corporate Sector in Disaster Management • Disasters being unforeseen events that .cause great damage, destruction and human suffering require immediate coordinated and effective response by Government/ Organisations/ Agencies, including Private and Corporate Sector

As per the DM Act, 2005, “Disaster Management is a continuous and integrated process of planning, organising, coordinating and implementing measures for prevention of damage or threat of any disaster — mitigation or reduction of risk — capacity building — preparedness — prompt response — evacuation, rescue and relief — rehabilitation and reconstruction

As per Companies Act, 2013, large profit making Corporates have to earmark at least two percent of the average net profits of the company made during the three immediately preceding financial years, in pursuance of its Corporate Social Responsibility Policy and make projects and programmes accordingly

The private sector has always been involved in DM System/ Cycle. The involvement and association of the corporate sector with national risk reduction and risk management initiatives and with dissemination of appropriate and practical structural and non-structural disaster prevention and mitigation measures necessary for their safe and disaster-free functioning has been accorded priority as part of a strategy to systematically mainstream holistic disaster management into the functioning of the corporate sector. The private sector has been the main source of supplies to all agencies involved in DM both at the Centre and at the State level e.g. hardware like vehicles, fire engines, equipments for Forces like National Disaster Response Force (NDRF), boats, tents, food supplies, medicines, pre-fab shelters, communication equipments, earth moving machinery, aircraft, helicopters etc.

Important role in watershed management, channel and drainage improvement, construction of reservoirs, anti-erosion works

In high-tech Early Warning Systems (EWS), e.g. Doppler Weather Radars (DWR), Automatic Weather Stations, Automatic Rain gauge Stations etc. large expenditure are proposed for procuring equipments manufactured mainly through Corporates Role of Private and Corporate Sector in Disaster.

INTEGRATING DM INTO DEVELOPMENTAL EFFORTS

The following are the details process to incorporate Disaster Management activities in to developmental activities :

- Awareness generation
- Training
- Mock drills

- Development of on-site and off-site DM plans
- Preparation of inventory of resources

Corporate Sector can play a pivotal role in development and enforcement of an appropriate technolegal regime which involves examining and reviewing the existing building by-laws and codes/ rules. Further Corporate Sector can support a techno-financial regime whereby financial institutions insist on adoption of disaster resistant construction as a pre-condition for providing loans/ grants .

Other Potential Areas for Participation by Private/ Corporate Sector • R&D for introduction of cost-effective technology/ equipment for hazard-resilient housing and infrastructure • Supporting and popularizing traditional and modern disaster mitigation approach/ method • Environmental studies and preservation of flora and fauna • Bringing in State-of-the-Art DM technologies from developed economies and best global practices • Introduction of new technology and innovative approach • Management skills • Arranging essential supplies and equipments • Providing Risk transfer mechanism through insurance products • Flexibility and speed of implementation • Capacity building of workers and local communities • Forging public-private partnerships

Public Private Partnership: Public & Private Emergency service facilities available in the district.

Public-Private Partnership for Disaster Management

Effective disaster management requires participation from the private sector in many areas. Apart from the fact that the private sector is responsible for ensuring safety of their own installations and their neighbour hoods, they can also contribute by assisting the community and the Government in bringing new concepts of disaster management and preparedness. Admittedly, there is a larger role for the Public Sector. It is necessary to set up an appropriate frame work for effective participation by the private sector in disaster management. Support for the Community. The private (including Public) sector companies should support the community in their preparedness for facing natural or man-made hazards. This is important from the point of view of the safety of the community and also from the point of view of the Company itself. It is presumed that most of the small companies and undertakings would restrict themselves to the communities in the immediate neighborhood of the manufacturing or operational facilities. However, large corporates could support preparedness of the community on a larger scale and at a different level. Both are important in the management of disasters. Given this consideration, the following are suggested as interventions by the private sector for supporting the community:

Simulations and Disaster Drills:

Each region is vulnerable to certain types of natural disasters. Manufacturing facilities can add a different element of hazard to the community living nearby. Therefore, awareness building of the community about the possible types of disasters, evacuation plans, medical support facilities, etc., could be built into the

District Disaster Management Plan or the City/Area Disaster Management Plan and supported by the private sector as part of overall disaster risk reduction efforts. Early warning and response systems: Early warning systems are important interventions for saving lives and property. The private sector can support maintenance of early warning systems and support community based response mechanisms.

Health Measures:

In the event of a hazard, health issues come to the forefront almost immediately, be it clean drinking water, medical aid, sanitation measures, availability of medicines or availability of professional medical services. The community would like to know what to do and whom to approach in the event of a crisis. The private sector can play a major role in making available information and providing services.

FACILITATE DEVELOPMENT OF AREA DISASTER MANAGEMENT PLANS:

Since area disaster management plans would need to factor in all the resources including that of the private sector, there is scope for the private sector to participate actively in the process of preparation of such a plan. This could involve logistics, provision of temporary facilities, communication, etc.

TRAINING:

Many companies provide products and services which are important from the point of view of disaster management. Companies which provide fire fighting equipments, communication equipments, earthmoving equipments, etc, should keep trained personnel for immediate availability in the event of a disaster. Others who are an integral part of Disaster Management Plans are Companies involved in ambulance services, hospitals, water supply, sanitation services, etc. Invariably, in any disaster situation, the first responder is the local community. Their ability to handle the situation in the first few hours is critical in saving human lives. Therefore, training as many volunteers as possible should be a priority for all communities. For example, all security guards, lift operators, drivers etc., who work mostly in private sector could be trained in rescue and first aid. In addition, many others like Red Cross volunteers, School Teachers, etc., also need to be trained. Some of these training programmes could be supported by the manufacturers of specialized equipments or providers of services.

SUPPORT IN RESEARCH, SCIENCE AND TECHNOLOGY

The private sector can play a prominent role in supporting the use of Science and Technology for disaster preparedness and mitigation.

SUPPORTS IN DISASTER RESPONSE

It is often seen that Corporates and Companies, in addition to individuals, offer their support for disaster response whenever a disaster occurs in any part of the

country. It is normally in the form of contributions in cash or in kind. The officials in-charge of disaster response are often confronted with the problems of mismatch between requirements at that point in time and supplies. Sometimes there is over-supply of materials and sometimes wrong materials reach the place. While it is recognized that private sector can play a major role in disaster response, a suitable frame work needs to be set up for meaningful co-operation and participation. In this context the following could be considered:

Companies which want to make commitments need to work from a common platform.

This platform could be set up and managed by OSDMA,DDMA. The Companies can make offers for contributing either equipments or services during any disaster. (cash contributions are managed through PM's Relief Fund or CM's Relief Fund). It can also specify the geographical areas where such support can be made available. This will be updated on a yearly basis. A similar platform at the District level could also be encouraged.

A GIS system could be designed, supported and jointly operated to enable the administration to plan disaster response effectively. This could not only map resources but also the risks and damages thereby enabling proper movement of relief materials to places where it is needed most. The system can also track and prevent possible misuse of relief materials.

Relief and reconstruction have to follow a set of minimum standards. For this, NDMA has issued National Guidelines for Minimum Standards of Relief. While it should be the responsibility of the Government to set the standards, relief materials below standards should not be allowed in any affected area.

To make use of expertise available in the society a panel of experts willing to provide assistance during a disaster can be maintained.

This could include experts from the Government, the private sector and the community. Some of them may be willing to travel to the affected regions and some of them may be able to share their knowledge over the telephone, internet, etc. These are valuable resources for the management of disasters.

For instance in a postearthquake reconstruction scenario, engineers working in Government, academic institutions, or retired engineers could be very helpful in designing appropriate structures for buildings to be reconstructed .

Many private sector entities and others may want to help in building infrastructure like roads, bridges and houses. Contributions for these should be welcome, provided they meet minimum standards prescribed by the Government. Involving private sector for speedy restoration of critical infrastructure is important. It is, therefore, necessary to map available resources with the private sector and shortlist such entities which can complete the job as per specifications in a prescribed time frame for quicker completion of such projects. However, the short-listing and or engagement of such companies will have to follow transparent

processes. To avoid delays in the process, there could be “Rate Contract” mode prescribed for critical operations to be used in an emergency.

PPP care for the Community based disaster management plans should also take care of the following:

- (i) The community has to be empowered to plan and implement programmes and respond to disasters effectively. This would include increasing their awareness, providing for early warning systems and providing for community evolved plans for designing infrastructure in their communities; be it shelters, exit plans, flood control measures or rescue and relief services.
- (ii) Community volunteers should be trained for rescue and relief particularly with regard to the type of hazards that they are normally exposed to e.g.: training of divers in flood prone areas).
- (iii) There is valuable traditional knowledge and wisdom available in many communities. This could be in the form of local knowledge regarding the impact of disasters, local construction techniques or even community behaviour in a disaster. Introduction of modern technology should not override this knowledge, but take into account the value of this cumulative wisdom and integrate it with modern science and technology. This could be done only if there are adequate sensitivities developed for understanding this knowledge, documenting it, experimenting with it and fine-tuning it to suit new challenges and problems.

A major effort with the involvement of universities, other educational institutions, disaster management training institutions and DDMA's, and OSDMA's need to be put together as part of the overall disaster management plan to achieve this objective.

NALCO Smelter			
16.	Executive Director	220110	220149
17.	Chief of HRD	220125	220265
18.	Chief of Medical	220225	220123
19.	Chief Safety Officer	222245	2220813
NALCO (CPP)			
21.	General Manager	220267	220276
22.	Chief of HRD	220144	220028
23.	Chief of Medical	220225	220123
24.	Chief Safety Officer	220330	220614

26.	General Manager	243210 243252	243201
27.	Chief of HRD	243344 247150	243034
28.	Chief of Medical	220225	220123
29.	Chief Safety Officer	247582	243118
31.	General Manager	249101	249152
32.	Chief of HRD	249127	249308
33.	Chief of Medical	249029	249257
34.	Chief Safety Officer	249761	249020
Sl.NO	NAME OF HOSPITAL	LOCATION	P&T PHONE
01.	SATABDI	DERA	269678
02.	HOSPITAL, CMO	KANIHA	252234
03.	NTPC HOSPITAL,	NALCO ANGUL	220245/220252
04.	CMO	VIKRAMPURA	20245/20252
05.	NALCO	ANGUL	230333
06.	HOSPITAL, CMO F.C.I HOSPITAL, CMO GOVT.HOSPITAL GOVT.HOSPITAL	TACHER	240226(SDMO)
Sl.No.	AUTHORIRT	ADDRESS	TELEPHONE NO OFFICE RESIDENCE
01.	ED/NALCO	ED, M/s. NALCO Ltd	220110 220303
02.	GM/ TSTPP	Talcher Kaniha, Angul Dt.	(06764) (06764) 243252 243201
03.	Sr.Mgr(HR)	C/37 PTS	243107 243172
04.	CMO/MCL GM/TTPS Sr.Mgr(Safety)	Dera, Talcher (Via) Angul Dist. Talcher, Angul Dist Talcher, Angul Dist	240182 269184 249101 249152 249761 249020

CHAPTER -05

PREVENTION AND MITIGATION MEASURES

PREVENTION&MITIGATION MEASURES OF THE DISTRICT .

Personal preparedness focuses on preparing equipment and procedures to use when a disaster occurs, i.e., planning. Preparedness measures can take many forms including the construction of shelters, implementation of an emergency communication system, installation of warning devices, creation of back-up life-line services (e.g., power, water, sewage), and rehearsing evacuation plans. Proper Preparation can save time, money and lives. Planning for all different types of events to magnitudes in at utmost importance for disaster. Proper planning is instrumental during times of chaos to make situations less stressful. With proper planning duties will be pre-assigned to different agencies, so that when disaster does occur responders can jump right into action. Two simple measures can help to prepare the individuals for either sitting out the event or evacuating, as necessary. For evacuation, disaster supplies kit may be prepared and for sheltering purposes a stockpile of supplies may be created.

The District Administration has already taken steps in providing instructions to the line departments and Block Administrations to take adequate and emergent action at least in the following details. They also have been instructed to ensure the completion of the related activities by the mentioned time frame, before disaster season. Also every department has been advised to take development action plans should be disaster prevention and that can help in disaster mitigation.

Short Term Measures

Type of Sector	Sub Sector	Mitigation Measures	Responsible Dept.	Time Frame
Infrastructure development	IEC Activities	Walling, posters, rallies, street plays, volunteers training, task force training	NGO selected by the BDOs and DI & PRO	During the last week of May & 1 st week of June.
	Road	Repair of vulnerable/ affected points identified by the departments	PWD, RD	By 15 th of June

	Embankments	Receiving the Height of the embankment points identified Repair of Vulnerable/affected points identified	Irrigation Department	By 15th of June
	Safe Shelters & Multi purpose Cyclone shelters	Ensure maintenance of shelters	RD department, DI and CI of Schools	Before 15 th of June

When the disasters are inevitable, the only way is to mitigate its impact. This falls under the Short Term Measures like immediate relief, reducing the response time to avert any losses, provide the vulnerable and affected people with the basic needs, supply of minimum essential items to those who have lost their properties and movables, grant of long/short term loans at a concession rate.

Long Term Measures:

The Long Term Measures to be followed include maintenance and repair of the embankments of the rivers and canals going through the district, construction embankments, bank protection and watershed management, bio-mass production by the forest/horticulture department.

Instructions have been given to all district level departments to put forth such activities in their yearly action plan. Also they should notice and take necessary steps to ensure the developmental units and new constructions are disaster free and disaster resilient.

Sector Wise Vulnerability Reduction Measures

Type of Sector	Sub Sector	Mitigation Measures	Responsible Deptt.	Time Frame
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Communication & Infrastructure	Communication	Ensure maintenance and good running condition of communication systems	Telecom and District Administration	By 31 st of May
	Drinking water and sanitation	Repair of the Damaged standpoints Check the Leakage of overhead tanks and pipes	RWSS	All the time
	Technology Dissemination	Installation of VHF in all the block headquarters	OSDMA and District Administration	Before April 30 th
Health/Animal Husbandry	IEC Activities	Walling, posters, rallies, street plays, volunteers training, task force training	NGO selected by the district and CDVO	By May 31 st and after the receipt of warning
	Immunisation & Vaccination	Stock piling of vaccines	CDVO & CDMO	By April 30 th
	Training	Health care, sanitation, first aid	CDVO & CDMO	After the 1 st Natural Calamity Meeting
Livelihood	Awareness	Walling, posters, rallies, street plays, volunteers training, task force training	NGO selected by the district and CDVO	By May 31 st and after the receipt of warning

	Agriculture	Flood Resistant crops/ Alternative cropping Drought Resistant – short duration paddy Crop insurance Coordination with Irrigation and DRDA	Agriculture and horticulture department	Normal period Pre flood Period
	Horticulture	Nursery raising Insurance	Horticulture Department	Normal period Pre flood
Insurance	IEC Activities	Walling, posters, rallies, street plays, volunteers training, task force training	NGO selected by the district and CDVO	During normal period
	Livelihood	Ensure insurance of livestock, crops, work sheds/workshops etc.	Agriculture, Cooperative Society	During normal period
	Life	Awareness	NGOs	During normal period

Special Mitigation Measures undertaken in the district.

(Structural and Non-Structural Plans and their Continuation).

- Walling and Posters are done regularly describing Does and Don'ts and precautionary measures to be taken into action at pre, during and post disaster events. The posters of remedies on Fire accident, Sunstroke, Flood

and Cyclone, Nutritional care during disasters etc are disseminated at the Govt buildings and public places.

- Special trainings are organized in the district of Govt Officials, NGOs, Volunteers, Disaster Management Committee members, PRIs etc on DRM.
- Special Task Force trainings are organized of the Disaster Management teams, Volunteers (NSS, NYK) etc on First Aid, Search & Rescue etc.
- Meetings, rallies are arranged at district, block and village level to put an impact on necessity of Disaster preparedness and subsequent measures.
- In the district, Observation of Disaster preparedness Day, Volunteers Day, competitions among school and college students on special DRM topics etc are taking place-creating awareness among the community on Disaster management.
- To establish a better communication networking within the district, the District Control Room and Block headquarters along with a few more important stations like Dam sites, Tahasils and Sub-Collector's Office are connected with VHF systems. It will establish a two-way communication linkage between the stations. The EOC is connected with a toll free telephone having no- 1077, which can be accessed for any disaster related information.
- Repair and restoration of vulnerable points on road. The engineering department and all Blocks are in regular coordination of such measures.
- Repair and restoration of proper vulnerable points on embankments. The engineering department and all Blocks are in regular coordination of such measures.
- Proper maintenance of shelter places. For this a regular communication is obtained with DEPE, Angul, CI of Schools and engineering departments.
- It is regularly ensured by the district control room and subsequent control rooms at Sub-divisions, Zones and Sub-Zone level, the functioning of Telephones connected, Computers along with other electronic equipments functional.
- The functioning of all water supply systems is ensured functioning well. Alternative arrangements have also been made for functioning of units during emergency and each repairing of it.
- The functioning of tube wells is ensured before the disaster in the rural areas. Utmost priority has been given for repairing of the units. Also a few more vulnerable positions have been identified and constructions are carried out.
- Prior to the disaster seasons adequate vaccination has been done by the health and animal husbandry departments.
- Training programs and awareness are continuing for common people on various health aspects. Volunteers are receiving trainings on health care, sanitation, First Aid and PFA.
- There formed a "crop and weather watch group" in the district consisting the technical members of Agriculture department. The group at the district level

will be responsible to advise on the alternate cropping pattern, relative crop corrections etc during the drought period and flood resistant crops.

- The Agriculture department will make an assessment on the vulnerability of crops and advise accordingly on the requirement of seeds and associate fertilizers.
- Crop insurance will be made with the farmers' field crop by the agencies.
- The Horticulture Units will supply the horticulture plants to the farmers. Important horticulture plants should be taken with insurance coverage.
- The Departments, Units and Individuals are advised to make insurance of livestock, crops, work sheds/workshops etc.

In the current year it was strategically agreed that all the 1st and 2nd priority of development action plan in the GPs and Villages will be taken as the activities under Flood Protection, Drought Mitigation, Watershed Management and provisioning of drinking water and irrigation related. A list of this as mitigation action plan is attached as annexure.

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.	DDA	DCP(Low Remunerative crops to High Remunerative crops)	April	September	-	Deptt.
2.	DDH	Rejuvenation of Old Orchards	-	3 Months	Subsidy 0.20/Ha.	MIDH Scheme
3.	DDH	Plantation (Perennial Crops)	-	3 Months	50% Subsidy on cost of planation	MIDH Scheme
4.	RMC (R)	Awareness for Paddy Procurement	November & April	November & April	1.50	Own
5.	RMC (R)	Awareness for Cotton Procurement	November	November	1.00	Own

PRIVENTION & MITIGATION PLAN

Sector wise Vulnerability Reduction Measures:

Type of Sector	Sub-Sector	Mitigation Measures	Responsible Department/ Personnel	Time Frame
Infrastructure Développement	IEC Activities	<ul style="list-style-type: none"> • Distribution of leaflets, posters & wall painting. • Awareness generation programme in schools and colleges, conducting padayatra other and relies. • Organising staff development and refresher training to concerned dept., task force team NGO and CBOs . • Conduct regular Mock Drill. • Plantation Programme. 	DIPRO & NGO Co-ordination Cell.	Through out the year (With regular intervals)

	Road	<ul style="list-style-type: none"> • Identification/ repair of main and alternative routs • Repair of identified vulnerable points. • Conversion to pucca roads of all • Village roads. • Encourage water ways ferry's 	PWD , RD and Block	During normal Time & Immediately after disaster
	Embankment	<ul style="list-style-type: none"> • Strengthening and raising the height of weak embankments, points • Storage of flood fighting materials like sandbags , bamboo's mats etc. 	• Irrigation Dept	During pre-flood season
	Bridges	<ul style="list-style-type: none"> • Regular maintenance of Bridges. 	R & B & RD dept	During normal period

	Safe Shelters	<ul style="list-style-type: none"> • Ensure Maintenance of the Flood shelters • Identification of places for preparation of mounds and cattle shelters. • Ensure multipurpose use of shelters by community, schools, NGOs, CBOs . 	Sub-Collectors, BDOs & NGOs & DEO/BEO	During normal period
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Type of Sector	Sub-Sector	Mitigation Measures	Responsible Department / Personnel	Time Frame
Infrastructure Développement	Communication	<ul style="list-style-type: none"> • Ensure proper maintenance of Telephone, FAX, WLL Phones, Wireless & VHS sets. • Ensure timely setting of Wireless Stations in District/ Block Office. <p>Installation of VHF / HAM Radio in all the Block Headquarters</p>	BSNL, OSDMA, SP signal	April-May

	Drinking Water & Sanitation	<ul style="list-style-type: none"> • Assessment of running /defunct Tube wells & make necessary arrangements • Identification of scarce water pockets installation of water supply system. • Identification of with sub-mergible TWs and rising of its platform height. • Arrangement of Tankers / Syntax Tank. • Assessment of requirement of disinfectants and ensure its regular use. 	PHD & RWS S	During normal time & immediately after disaster
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	Power	<ul style="list-style-type: none"> • Ensure proper maintenance of Electric Sub Stations , Power grids • Complete electrification through out the District. • Install Solar Lamps nears flood & Cyclone shelters & ensure its maintenance. <p>Ensure un-interrupted power supply to the district control room during disaster period</p>	CESCO	Through out the year.
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Health & Animal Husbandry	IEC Activities distribution leaflets	<ul style="list-style-type: none"> • Distribution of leaflets , posters & wall painting , • Conducting meeting / workshops, staff development training , orientation to village level volunteers , taskforce members • Awareness generation programme such as conducting relies street plays etc. 	CDMO, CDVO & NGO	Pre, during & post disaster period.
	Vaccination/ Disinfections	<ul style="list-style-type: none"> • Procurement & stock piling of vaccines. • Regular vaccination of domestic animals • Regular dis-infection of TWs , Wells & Ponds . • Regular cleanliness of Medical / Hospital Campus • Procurement of a Refrigerator for Veterinary Hospital. 	CDMO & CDVO	Pre, during & post disaster period.
	Training	<ul style="list-style-type: none"> • Impart trainings on Health care, Sanitation, Insurance First Aids to Medical staff as well as volunteers 	CDMO	During normal period.

SECTORS WISE VULNERABILITY REDUCTION MEASURES

Type of Sector	Sub-Sector	Mitigation Measures	Responsible Department	Time Frame
Livelihood Sector	IEC Activities	<ul style="list-style-type: none"> • Distribution of leaflets , posters & wall painting • Conducting meeting workshops staff development training, orientation to village level volunteers & to beneficiaries on EDP (Entrepreneurship Development Programme). • Awareness generation programme such as conducting relies street plays etc. 	BDOs,DIC, Banks	During normal period.
	Agriculture	<ul style="list-style-type: none"> • Alternative cropping , Installation of L .I. Points • Crop Insurance, Provision of Credit Facilities & Cold Storage 	Dy. Director Agriculture & DAOs ,	During normal period.
	Horticulture	<ul style="list-style-type: none"> • Providing nursing raising training & Insurance facilities . 	Dy. Dir Horticulture	During normal period.
	Fishery	<ul style="list-style-type: none"> • Providing fishery technology & training 	Dy. Dir Fishery	During normal period.

Type of Sector	Sub-Sector	Mitigation Measures	Responsible Department	Time Frame
Insurance	IEC Activities	<ul style="list-style-type: none"> • Distribution of leaflets , poster , wall painting • Conducting meeting workshops staff development training, orientation to line department, Block functionaries, NGOs, village level volunteers & to beneficiaries on Insurance Schemes. • Awareness generation programmes such as conducting relies street plays etc. 	Block, Insurance Companies, Agriculture Department, Bank, NGOs.	During normal period.
	Infrastructure	<ul style="list-style-type: none"> • Maintenance of Roads / Building • Maintenance of Block Level / GP Level Storage godown 	R & B, Deptt. And Block Authority	During normal period.
	Life & Livelihood	<ul style="list-style-type: none"> • Insurance of life, livestock, Crop & small business units etc. 	Block, Insurance Companies, Agriculture Department, Bank, NGOs.	During normal period.

Type of Sector	Sub-Sector	Mitigation Measures	Responsible Department	Time Frame
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<p>Planning & Response</p>	<p>IEC, Relief & Rehabilitation Activities.</p>	<ul style="list-style-type: none"> • Renewal of Block Contingency Plan at regular intervals. • Aware Community through distribution of leaflets, posters & wall painting. • Awareness generation programme such as Conducting relies street plays etc. • Conducting meeting workshops staff development training, orientation to line department, GP functionaries, NGOs, village level volunteers & to beneficiaries on Contingency Plans. • Regular mock drill at level. • Timely preparedness & dissemination of warnings, carrying out search & rescue , evacuation Operations. • Shelters to victims. • Protection to livestock. • Carry out emergency relief operation. • Clearance of debris & disposal of dead bodies & maintenance of sanitation. • Damage assessment. • Taking care of Starvation Cases. • Maintenance of law and order. • Co-ordinance & Sharing of information. 	<p>Block and all Line Departments, NGOs & CBOs.</p>	
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Scope for integrating different schemes for Disaster Risk Reduction (DRR) Activities

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

12.	Janashree Vima Yojna	<ul style="list-style-type: none"> • Insurance protection. • Risk transfer.
13.	Pradhan Mantri Suraksha Bima Yojana (PMSBY)	<ul style="list-style-type: none"> • Insurance protection. • Risk transfer.
14.	Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)	<ul style="list-style-type: none"> • Insurance protection. • Risk transfer.
15.	Pradhan Mantri Awas Yojana (PMAY) - Housing for all by 2022	<ul style="list-style-type: none"> • Construct disaster resilient houses. • Vulnerable infrastructure risk reduction.
16.	Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)	<ul style="list-style-type: none"> • Construction of roads in remote areas. • Construction of multi-hazard shelters. • Plantation Activities. • Permanent Livelihood Activities.
17.	National Health Mission (NHM)	<ul style="list-style-type: none"> • Emergency Medical Response. • Ambulances Service. • Mobile Health Facility in Remote Areas.
18.	Pradhan Mantri Gram Sadak Yojana (PMGSY)	<ul style="list-style-type: none"> • Rural Road connectivity to remote and unconnected villages.
19.	Sarva Shiksha Abhiyan (SSA)	<ul style="list-style-type: none"> • Construction of new disaster resilient school buildings. • Retrofitting in existing school buildings. • Disaster preparedness and planning at school.
20.	Swachh Bharat Mission (SBM)	<ul style="list-style-type: none"> • For clean and hygienic environment. • Protection health.
21.	Soil Health Card Scheme	<ul style="list-style-type: none"> • Complete evaluation of the quality of soil. • Corrective measures to improve productivity.
22.	Pradhan Mantri Ujjwala Yojana (PMUY)	<ul style="list-style-type: none"> • Smoke and pollution free environment. • Protection of women health by smoke free cooking.
23.	Disease Control Programme	<ul style="list-style-type: none"> • Routine vaccination of livestock and birds to prevent contagious disease.
24.	Animal Health Camps	<ul style="list-style-type: none"> • Routine animal health camps to increase the health status and immunity of livestock and birds.
25.	BGREI-STV (Stress Tolerant Variety)	<ul style="list-style-type: none"> • Paddy-Sahabhagi(Drought resistance variety).
26.	State Plan	<ul style="list-style-type: none"> • Supply of hybrid vegetable mini-kits to farmers. • Implementation of single line trellies in

		vegetable crops. <ul style="list-style-type: none"> • Supplying of mango grafts, papaya, drumstick & K. Lime seedlings.
27.	MIDH	<ul style="list-style-type: none"> • Supplying of hybrid vegetable seedlings. • Supplying of loose flower seedlings. • Supplying of sprayers to the farmers in the subsidised rate.
28.	RMCLinkage	<ul style="list-style-type: none"> • Improve producers access and linkage to agriculture markets. • Training & development of marketing functionaries. • Alert farmers through announcement to safeguard agricultural produces. • Arrange tnpouline, dories for covering of farmers agricultural produce at the market yard of RMC.

[Source: Government Department/Web Site/CDVO/DDA/DDH/RMC]

National Legal Services Authority (NALSA)

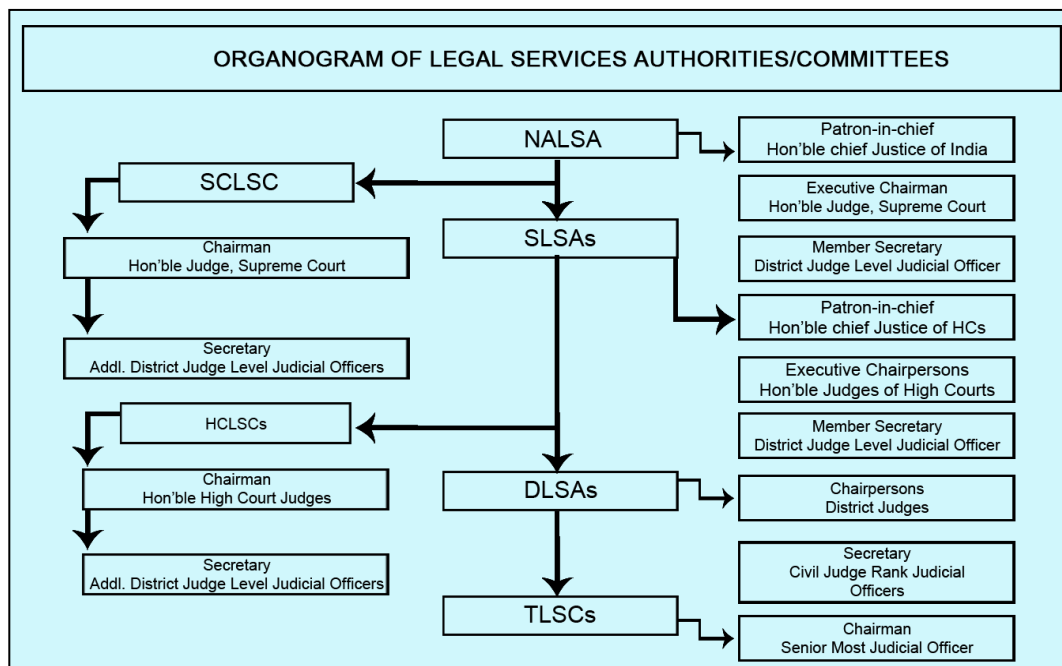
The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society. The Chief Justice of India is the Patron-in-Chief and the Senior most Hon'ble Judge, Supreme Court of India is the Executive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

CHAPTER -06

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 greenhouse 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. CO₂, CH₄ and N₂O) but increases in their atmospheric concentrations over the last 250 years are due largely to human activities. Other greenhouse gases are entirely the result of human activities (e.g. HFCs, PFCs, SF₆ and NF₃).

Table : 6.1

Greenhouse Gas	Global Warming Potential (GWP) over 100 years	% of Total Anthropogenic GHG Emissions (2010)
Carbon dioxide (CO ₂)	1	76%

Methane (CH ₄)	25	16%
Nitrous oxide (N ₂ O)	298	6%
Hydrofluorocarbons (HFCs)	124-14,800	< 2%
Perfluorocarbons (PFCs)	7,390-12,200	< 2%
Sulphur hexafluoride (SF ₆)	22,800	< 2%
Nitrogen trifluoride (NF ₃)	17,200	< 2%

6.2 IMPORTANT GREENHOUSE GASES: CARBON DIOXIDE (CO₂)

Most important greenhouse gas (contributes ~64% to total radiative forcing by long-lived GHGs). Half of CO₂ emitted by human activities is being absorbed in the biosphere and in the oceans. Rest remains in the atmosphere for hundreds to thousands of years.

The most important anthropogenic GHG is carbon dioxide (CO₂). It accounts for around 64% of total radiative forcing due to LLGHGs. Carbon dioxide does not have a specific lifetime because it is continuously cycled between the atmosphere, oceans and land biosphere and its net removal from the atmosphere involves a range of processes with different time scales. CO₂ is primarily emitted as a result of burning of fossil fuels, deforestation and forest degradation and iron and steel production. Oceans and forests are the main sequesters of carbon i.e. sinks that can absorb CO₂ from the atmosphere. Carbon dioxide is the gas to which all other gases are compared when speaking of Global Warming Potential. Emissions of other greenhouse gases can be converted into *CO₂ equivalent emissions*.

Table : 6.2

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

6.3 IMPORTANT GREENHOUSE GASES: METHANE (CH₄)

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 (CH₄) which contributes to approximately 18% of total radiative forcing due to LLGHGs. Approximately 40% of methane is emitted into the atmosphere by natural sources (i.e. wetlands and termites). About 60% comes from human activities (i.e. 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 ₄ Emission (PPM)	Action taken for cutting down émission
-	-	-	-	-	-

6.4 Important Greenhouse Gases: Nitrous Oxide (N₂O)

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

Nitrous oxide is the third most significant GHG, contributing to about 6% of radiative forcing due to LLGHGs. The primary human sources of N₂O are fertilizer production and use in agriculture and various industrial processes. It is estimated that N₂O stays in the atmosphere for an estimated 114 years. Its impact on climate, over a

100-year period, is 298 times greater than equal emissions of carbon dioxide. It also plays an important role in the destruction of the stratospheric ozone layer which protects us from the harmful ultraviolet rays of the sun.

Table : 6.4

Sl. No.	Name of the Block	Fertiliser/ Industrial processes	Annual Usage (In tonnes)	Ranking as per N ₂ 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 (SF₆). Mainly developed as substitutes for ozone-depleting substances.

Fluorinated gases are a family of man-made gases used in a range of industrial applications. Sources include refrigerants, air-conditioning, solvents, aluminium and magnesium production, etc. Many fluorinated gases have very high Global Warming Potentials (GWPs) relative to other greenhouse gases. That means small atmospheric concentrations can have large effects on global temperatures. They can also have long atmospheric lifetimes, in some cases, lasting thousands of years. Fluorinated gases are removed from the atmosphere only when they are destroyed by sunlight in the far upper atmosphere. In general, fluorinated gases are the most potent and longest lasting type of greenhouse gases emitted by human activities. There are three main categories of fluorinated gases: hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

- 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 (SF₆) 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 flourinatedgas 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, CFCs which contribute about 12% to total radiative forcing by LLGHGs. CFCs can stay in the atmosphere for more than 1,000 years. CFCs have a Global Warming Potential (GWP) that ranges between 4,750 and 14,400 (over 100 years time span). CFCs are used in the manufacture of aerosol sprays, blowing agents for foams and packing materials, as solvents, and as refrigerants.

Table : 6.6

Sl. No.	Name of the Industry/Firm/Plant	location	Annual émission (In PPM)	Ranking as per flourinatedgas 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, i.e. by making older equipment more energy efficient;
- Preventing new GHG emissions to be released in the atmosphere, i.e. by avoiding the construction of new emission-intensive factories;
- Preserving and enhancing sinks and reservoirs of GHGs, i.e. 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 ₂)	Fossil fuel combustion, land use changes, cement production, etc.	76%
Methane (CH ₄)	Fossil fuel mining/distribution, livestock, rice agriculture, landfills, etc.	16%
Nitrous oxide (N ₂ 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 ₆)	Insulator in electronics and magnesium industry, etc.	< 2%
Nitrogen trifluoride (NF ₃)	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 CO₂ emissions level to meet the 2°C target. The report states that in order to have a greater than two in three chance of keeping *global warming* below 2°C, cumulative emissions of CO₂ cannot exceed 1,000 Gigatonnes of carbon (GtC). As of 2011, more than half this amount, or over 500 GtC, has already been emitted since 1861-1880. When the effects of other greenhouse gases are included, even less CO₂ could be emitted to keep below a 2°C warming.

Current annual emission levels are at 9.5 GtC and are likely to grow every year due to population growth and economic development patterns. If annual emissions

continue to grow as in past years (“Business as Usual” scenario) the carbon budget will be exhausted in the next three decades.

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

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"> • Use of renewable heat and power (hydropower, solar, wind, geothermal and bio-energy). • Improved supply and distribution efficiency. • Carbon capture storage (CCS). • Combined heat and power.
2.	Transport	<ul style="list-style-type: none"> • More fuel efficient vehicles. • Use of alternative energy sources (biofuels, cleaner diesel, etc.). • Better land-use and transport planning. • Shift from individual transport to public transport systems. • More efficient driving practices. • Non-motorized transport (cycling, walking).
3.	Industry	<ul style="list-style-type: none"> • Process-specific technologies that improve efficiency and reduce emissions. • Material recycling and substitution.

		<ul style="list-style-type: none"> • Heat and power recovery/cogeneration. • Control of greenhouse gas emissions.
4.	Agriculture	<ul style="list-style-type: none"> • Manure and livestock management to reduce CH₄ emissions. • Improved fertilizer application techniques to reduce N₂O emissions. • Improved crop and grazing land management to increase soil carbon storage. • Restoration of cultivated peaty soils and degraded lands. • Agro-forestry practices.
5.	Forestry	<ul style="list-style-type: none"> • Reduced deforestation. • Afforestation/reforestation. • Forest management. • Tree species improvement to increase biomass productivity and carbon sequestration.
6.	Waste	<ul style="list-style-type: none"> • Landfill methane recovery. • Waste incineration with energy recovery. • Composting of organic waste. • Controlled wastewater treatment. • Recycling and waste minimization. • Biocovers and biofilters to optimize CH₄ oxidation.

6.9 Sector Specific Climate Change Mitigation Projects

Table : 6.10

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



CHAPTER -07

SCHOOL SAFETY & CHILD CARE INSTITUTIONS OF ANGUL

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">• Policy for safety audits in all schools• 'Stability certificate' by Government-certified engineer.	<ul style="list-style-type: none">• Schools must take appropriate safety measures and an emergency response plan that delineates staff responsibilities, communication modes, and training and

<ul style="list-style-type: none"> • Manual for fire safety procedures and other safety precautions. • The National Building Code of India, 2005, to construct fire-safe buildings. (Revised 2016). 	<ul style="list-style-type: none"> • updating procedures for all members of the faculty, staff and students. • Fire insurance coverage should be made mandatory for all schools. • Ensuring that the kitchen in the precincts of the school has adequate safety mechanisms.
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[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

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.
- Familiarization Exercise (FAMEX) Programmes.

4. Disaster Management in Core Curriculum

5. Regular monitoring of risk and revision of School Safety Plans (including Safety Audits & Availability of Emergency Equipment).

EDUCATION:

1.26- Availability of Educational Facilities:

2.1-Educational Infrastructure and other Facilities:

Sl. No.	Name of the Block	No. of Villages	No. of Villages having Primary School within the village	No. of Villages having Access to ME/ High School within 5 Km.
1	Angul	344	323	333
2	Athamallik	531	495	528
3	Banarpal	247	239	249
4	Chhendipada	472	441	464
5	Kaniha	305	281	292
6	Kishorenagar	428	391	430
7	Pallahara	382	347	355
8	Talcher	194	192	194
9	Angul MPL	23	23	23
10	Athamallik NAC	12	12	12
11	Talcher MPL	21	21	21
Total		2959	2765	2901

Sl. No.	Name of the Block	No. of Primary Schools	No. ME Schools	No. of High Schools	No. of Teachers	Teacher Pupil Ratio	No. of Colleges	No. of ITI/ Polytechnic/ Vocational Training Institutes
1	Angul	138	68	34	735	29.79	Not Available	Not Available
2	Athamallik	129	72	24	718	23.62	NA	NA
3	Banarpal	103	73	33	732	28.74	NA	NA
4	Chhendipada	133	74	38	880	25.88	NA	NA
5	Kaniha	106	82	36	747	22.74	NA	NA
6	Kishorenagar	111	71	25	699	24.38	NA	NA
7	Pallahara	159	93	34	927	21.17	NA	NA
8	Talcher	66	60	31	471	20.94	NA	NA
9	Angul MPL	19	9	8	165	27.41	NA	NA
10	Athamallik NAC	12	3	2	61	28.62	NA	NA
11	Talcher MPL	16	11	5	149	19.52	NA	NA
Total		992	616	270	6284	24.72		

1.27- Enrolment Status of Children (6-15 years):

Sl. No.	Name of the Block	Total No. of Children Enrolled	No. of Children Dropped Out	No. of Children Never Enrolled
1	Angul	24691	3	0
2	Athamallik	17653	5	0
3	Banarpal	33439	0	0
4	Chhendipada	25920	24	0
5	Kaniha	21294	0	0
6	Kishorenagar	18824	0	0
7	Pallahara	21650	23	0
8	Talcher	22076	0	0
9	Angul MPL	8381	0	0
10	Athamallik NAC	2194	1	0
11	Talcher MPL	5766	1	0
Total		201888	57	0

DETAILS OF SCHOOLS

7.3 CATEGORY & TYPE OF SCHOOLS

7.1 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				
Angul	16115	0	4773	0	1007	1528	2659	137
Athamallik	12796	0	3801	0	364	1799	692	0
Banarpal	16056	0	4551	0	428	2047	11241	1163
Chhendipada	17271	0	4444	0	1061	1734	2845	299
Kaniha	12692	0	3874	0	420	1316	3984	324
Kishorenagar	12845	0	3732	0	467	1598	1720	60
Pallahara	14390	0	4547	0	691	2097	1961	61
Talcher	7068	0	2309	0	487	950	10465	1747
Angul MPL	0	3085	0	1438	0	166	3209	649
Athamallik NAC	0	1186	0	560	0	0	448	0
Talcher MPL	0	2192	0	717	0	0	2780	77
Total	109233	6463	32031	2715	4925	13235	42004	4517

[Source: DEO, Angul]

7.4 Category & Type of Students

7.1 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				
Angul	175	0	19	0	8	13	27	2
Athamallik	201	0	9	0	2	15	8	0
Banarpal	158	0	13	0	0	16	23	4
Chhendipada	185	0	19	0	10	17	17	2
Kaniha	164	0	22	0	4	12	23	2
Kishorenagar	176	0	13	0	2	11	14	1

Pallahara	244	0	17	0	2	16	15	1
Talcher	93	0	13	0	7	11	27	7
Angul MPL	0	18	0	4	0	2	10	2
Athamallik NAC	0	11	0	2	0	0	4	0
Talcher MPL	0	17	0	5	0	0	10	0
Total	1396	46	125	11	35	113	178	21

[Source: DEO, Angul]

7.5 SCHOOL SAFETY ADVISORY COMMITTEE OF ANGUL DISTRICT

1. Date of Formation : 05-07 -2018
2. Institutional Architecture

7.6 DETAILS OF SCHOOL SAFETY IN THE DISTRICT

2 School Safety Advisory Committee (District)				
Date of Formation: 05.07.2018				
Institutional Architecture				
No.	Name & Designation	Contact No.	Email.ID	Remarks
	Collector & DM, Angul (Chairperson)	06764-230234	dm-angul@nic.in	
	Superintendent of Police, Angul (Co-Chairperson)			
	District Fire Officer, Angul (Member)			
	District Welfare Officer, Angul, (Member)	9937391580		
	District Social Welfare Officer, Angul (Member)			
	CDMO, Angul (Member)			
	Executive RWSS/PWD, Angul (Member)			
	District Emergency Officer, Angul			

	(Member)			
	District Panchayat Officer, Angul (Member)			
0	Principal, DIET, Angul (Member)			
1	Block Education Officer, Angul (Member)		beoangul.sme.od@nic.in	
2	Prasanna Kumar Behera, Secretary, Nature Environment & Wildlife Society, Angul (Member)			
3	Parsuram Das, Secretary, Yuba Shakti, Angul (Member)			
4	District Education Officer, Angul (Nodal Officer & Member Convenor)	9437126757	deo02@gmail.com	

7.3 Details of School Safety in the district

Sl. No	Activity	Total School	Angul	Athamallik	Banarpal	Chhendipada	Kaniha	Kishorena gar	Pallahara	Talcher
1	Schools having School Safety Advisory Committee (Number)	1925	280	252	214	250	227	217	295	90
2	Schools having School Disaster Management Plan (Number)	1771	258	232	197	230	209	200	271	75
3	Schools having conducted Safety Audits Structural (Number)	0	0	0	0	0	0	0	0	0
b	Safety Audit (Non-structural) Number	0	0	0	0	0	0	0	0	0
4	Schools having conducted Annual Mock Drill (Number)	71	11	6	11	3	19	6	7	8
5	Schools having Fire Extinguisher (Number)	1580	231	207	175	205	186	178	242	56
6	Schools Adhering to safety norms in storing inflammable & Toxic Material (Number)	0	0	0	0	0	0	0	0	0
7	Schools confirming safety standards as per local	0	0	0	0	0	0	0	0	0

	building bye-laws (latest) (Number)									
8	Schools having issued recognition certificate under sub-Rule-15 of RTE rules 2010 (only to schools that comply with structural safety norms) (Number)	0	0	0	0	0	0	0	0	0
9	Schools where students & teachers undergo regular training on school safety & Disaster preparedness (Number)	64	8	8	8	8	8	8	8	8
10	Schools where disaster management is being taught as part of the curriculum (Number)	0	0	0	0	0	0	0	0	0

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 on Fire/ Earth quake Rescue	77	December, 2019	Fire Service & ODRAF
2.	Preparation of School Disaster Management Plan	88	December, 2019	BEO & HMs Concerned

7.8 DETAILS OF CHILD CARE INSTITUTIONS

Details of Child Care Institutions- Angul

Sl. No.	Name and Address of the Organization	Boys	Girls	Total No of Children	Name and Contact no. of the Shift-in-Charge	Available Fire Safety Equipments	No. of Staffs Trained on Fire	Name the Nearby open space for evacuation	Distance of Open space from the Centre in	Name the Nearby Alternative Shelt
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						(Fire Extinguisher, Alarm) Yes/No	Safety Equipments		Meters	
1.	Adruta Children Home (a Unit of RAWA Academy), At-Panchamahala, Po-Karadagadia, Dist-Angul, PIN Code:- 759122	36	49	85	Satyabhama Nayak (Superintendent) - 8895642772	Yes	6	Garden and Playground	20 m	
2.	Athmallik Balashram, At/Po-Athmallik, Dist:- Angul	32	0	32	Umesh Kumar Agarwalla (Secretary)- 9437333703	Yes	4	Playground	20 m	
3.	Khired Basini Kanyashram (Managed by Nari Surakhya Samiti) At-Jamunali, P.O-Boinda, Block-Chhendipada District-Angul, PIN-759127	0	16	16	Smita Rani Pattnaik (Secretary)- 9437079223	No	—	Playground	25 m	

4.	Nabajiban Community Center, At-BalaramPrasad (Kendudhipa), Nalco Nagar, Angul	29	0	29	Basant Paital (Secretary)- 8895642 267	Yes	5	Playground	20 m	
5.	Specialised Adoption Agency (SAA) Adruta Children Home, At-Panchamahala, Po-Karadagadia, Dist-Angul, PIN Code: 759122	3	4	7	Sudarshan Parida (Manager/ Coordinator)- 9438840 688	Yes	6	Garden and Playground	20 m	
6.	Observation Home, Angul Near Fish Market, At/PO/Dist - Angul.	65	0	65	Amir Kumar Nath Sharma (Superintendent) - 9348850 720	Yes	3	Garden and Playground	10 m	
7.	Special Home, Angul Near Fish Market, At/PO/Dist - Angul.	2	0	2	Amir Kumar Nath Sharma (Superintendent) - 9348850 720	Yes	3	Garden and Playground	10 m	

CHAPTER 8

CAPACITY BUILDING & TRAINING MEASURES

APPROACH

Capacity building is integral to disaster management. The programmes in disaster mitigation and recovery cannot be successful without building adequate capacities. Though the focus on capacity building has resurfaced with the new vision on disaster management, the efforts towards building capacities have not been very systematic. This Plan not only aimed at building capacities of the grassroots level stakeholders in disaster management, it meant to follow a comprehensive and scientific approach to achieve its goals. 'Capacity is the combination of all the strengths and resources available within a community, society or organization that can reduce the level of risk or the effects of a disaster'. Capacity may also be described as physical, institutional, social or economic capability. The Project emphasized the fact that appropriate levels of training and knowledge are required for adequate capacity development, which is instrumental in determining what people do with available resources in times of crisis to reduce the damaging effects of disasters. Assessing capacities of people at risk is a very important step in choosing strategies for community disaster risk reduction, and capability or capacity building.

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.

CAPACITY BUILDING PLAN AND ACTIVITIES:

A. Orissa State Disaster Preparedness Day:

On 29th Oct, State, District as well as the block used to observe the Disaster Preparedness day every year to remember the disaster of the decade i.e. Super Cyclone and the level of devastation caused by it. And accordingly prepare ourselves to educate the stakeholders to minimize the losses if such type of incident occurs in future.

B. Mock Drill:

On 19th of June every year OSDMA with the help of Multipurpose Cyclone Shelter Management and Maintenance Committee (CSMMC) used to conduct the mock drill at the shelters constructed in the coastal belt. In which the trained volunteers along with the village community used to participate in the drill process to enhance their training skills. Also DMTs used to verify the functional status of the equipments supplied to the shelters in the drill.

C. Village and GP level preparedness activities:

The VDMC and PRI members at village and GP level organize programmes on disaster preparedness day through the help of NGO/CBO.

D. Capacity building plan and activities:

As a part of the training and capacity building component attention will be focused on to provide training to the PRI members, school teachers, line department officers.

E. Shelter level activities:

- Meeting of CSMMC every month to ensure the safety and security of equipments supplied to the Shelter and maintenance of the building
- Mock drills
- Response Drills
- DMT trainings at the shelter level

F. Shelter level activities:

On regular intervals shelter level activities on Disaster Preparedness like Mock Drills being conducted and all the active Volunteers are being involved in the whole process which raised the awareness level amongst the community.

Recently the NDRF Team also visited all the Shelters in the Angul and Chatrapur region, even the ODRAF Battalion also based at Chatrapur involved imparting Trainings to the Volunteers in the region.

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

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

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

Sl. No.	Name of the Course/ Training Programme	Participants	Duration of the Training Programme	Month of Organization	To be Organized by
1.	Capacity development of Line	ADM, Sub-Collector, All BDOs, Tahasildars, Head	1/2 Day	January	DDMA

	department Officers on DM & DRR	of line departments, Police & Fire Personnel.			
2.	Hospital Preparedness & Disaster management	Doctors and Hospital Administrators	2 Days	February	CDM&PHO
3.	Training programme on heat wave preparedness	All BDOs/ EE, RWS&S, CDMO, CDVO, NGOs	1 Day	February	DDMA
4.	Training programme on treating heat wave related health issues	Doctors and Paramedical Staff/ ANMs	1 Day	February	CDM&PHO
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	PWD/RWD
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	CDM&PHO

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	Sarapanchs & PS Members	1 Day	October	BDOs
13.	Role of NGOs/VOs/CBOs in disaster management.	District and block level NGOs/ VOs involved with administration in disaster management	1 Day	November	DDMA
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 &	Civil Defense	5 Days	December	Commandan

	rescue and safe evacuation.	Volunteers, NSS, NYK Volunteers, NCC			t of ODRAF unit
16.	Role of Media in Disaster Management	Media Personal	1 Day	December	DI&PRO

District/ Block level Mock Drills

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, CAP & FAMEX Programmes at the district and block locations are as follows.

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 th	Awareness and Capacity Building
2.	Fire/ Forest Fire	High School, College Students, Forest Service Personnel/ Fire Service Personnel/ VSSs/ VOs	November-January	Awareness and Capacity Building
3.	Industrial Accidents/ Industry Specific Mock drills	Industrial Units, F&B, DLO, Fire Service Personnel	Twice in a Year	Safety Check and Awareness
4.	Crowd Management	Police Personnel & Festival Organisation Committees, Govt. Officials, Volunteers, NGOs, CSOs	July, September, November	Awareness & Safety Check
5.	Educational Institution Safety	Teaching and Non-Teaching Staffs, Students, BEO, Fire Service Personnel, etc.	Throughout the Year	Awareness Building
6.	Hospital Safety	Doctors, Medical Staffs Fire Service Personnel, etc.	Twice in a Year	Awareness and Hospital Safety

				Check
7.	FAMEX/CAP	Community, Students, AWW, ASHA, Teachers, Insitutions, etc of a Village	As per the Calendar	Awareness Generation for DRR

8.4. Preparation of Village Disaster Management Plans (VDMPs)

Keeping mind on vulnerability and continouss disaster total 293 villages of 8 blocks has been identified to prepare the village disaster management plan (VDMP) in the year 2019, this work will be completed under the technical support of the different local NGOS and OSDMA.

The State Executive Committee (SEC) in its meeting held at OSDMA/SRC has been approved for preparation of VDMPs for Community Capacity Building (CCB) and 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 to minimise the loss of life and property of the target community.

District/ Block level Mock Drills by Fire Officer/Station Officer

Sl. No.	Type of Mock Drill	Officials/ Institutions to be involved	Month/ Date	Remarks
1	Flood	Dist. Emergency Staff, Block Officials and Others.	June -2018	
2	Fire	Fire Officer and Staff, School/Colleges Teacher, Staff and Students.	Jan.- 2018 to Dec.- 2018 in different date.	
3	Drowning	Dist. Emergency Officer, Medical Officer, Fire Station Staff and Community People.	December-2018 (16.12.2018 to	

			22.12.2018)	
4	Industrial Accidents/ Industry Specific Mock drills	Officials and Security personnel of different factories & Industries	Sept.- 2018 to Dec.-2018	
5	FAMEX/CAP	Dist. Emergency Officer, Medical Officer, Fire Station Staff and Community People.	December- 2018 (16.12.2018 to 22.12.2018)	
6	Others if any	---	---	

CHAPTER -09

PREPARDNESS

7.1 Relief Lines : District to Blocks

Sl. No	Name of the Road		Type of Road & Length	Vulnerability of the route (Description of the Vulnerability)	Coverag e (Blocks)
	From	To			
01	Angul	Boinda	Tar Road 48Km	No	
02	Athamallik	Angul	Tar Road	5 Km	
03	Banarpal	Angul	NH		
04	Chhendipada	Angul	40 Km		
05	Kaniha				
06	Kishorenagar				
07	Pallahara				

08	Talcher				
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7.2. Relief Line Channels : Block to GPs & Villages

Sl. No	Name of the Road		Type of Road & Length	Vulnerability of the route (Description of the Vulnerability)	Coverage (In Nos.)	
01	From	To	Pitch	NA	Village	Population
02	Athamallick	Kudagoan	Pitch	NA	NA	NA
	Athamallick	Basudevpur	Pitch		NA	NA
	Athamallick	Kandhapada	Pitch	NA	NA	NA
	Athamallick	Luhahandi	Pitch		NA	NA
	Athamallick	Kamapala	Pitch	NA	NA	NA
	Athamallick	Purnuamanitri	Pitch		NA	NA
	Athamallick	Aida	Pitch	NA	NA	NA
	Athamallick	Luhansingha	Pitch		NA	NA
	Athamallick	Thakurgada	Pitch	NA	NA	NA
	Athamallick	Kiakata	Pitch		NA	NA
	Kanhia	Bajrkote	Pitch	NA	NA	NA
	Kanhia	Susuba	Pitch		NA	NA
	Kanhia	Samal	Pitch	NA	NA	NA
	Anugul	Tikarpada	Pitch		NA	NA
	Aniugul	Purunakot	Pitch	NA	NA	NA
	Banarpal	Sanakerjanga	Pitch		NA	NA
	Banarpal	Badakerjanga	Pitch	NA	NA	NA
	Kanhia	Arkil	Pitch		NA	NA

	Kanhia	Viru	Pitch	NA	NA	NA
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7.3.Resources available : Response force & Volunteers

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						
2	ODRAF						
3	Police						
4	Home Guards						
5	Civil Defense						
6	NCC	550					
7	NSS						
8	NYK						
9	Trained Task force						

- **Officer in charge of Control Room/ EOC:**

The control room is in overall charge of the Collector.

In the absence of Collector, ADM, PD DRDA, Emergency officer or any other officer or staff on duty at that point of time shall remain in charge of Control Room. The person in charge of control room shall be personally responsible for implementing the SOP. She/he shall take all decisions as

outlined below and sign for the Collector on all reports mentioned below. She/he shall not wait for orders from anybody.

- **Duty in Control Room:**

Following staff and officers shall perform duty in Control Room on getting any information from any source about any emergency. Apart from these, other officers or staff who gets the information from any source will be in contact with the Control room.

- Collector, ADM, PD, DRDA, District Social Welfare Officer, Emergency Officer, Sub-Collector Talcher, CDMO, CSO, DIPRO and RTO and all the coordinators of the District level DMTs.
 - All staffs of Emergency Section
 - Getting the Control Room ready

Following preparatory steps will be taken for keeping the control room functional during emergency.

- Shifting/Connecting two phone lines to control room functional. One of the above is the toll free no that is 1077 (from any landline) & 06764-230980 (from any mobile).
- Connecting/functioning of the VHF set in Control room. If required, the police VHF may be in use.
- Charging the battery of inverter, if present in control room or Collector's office or making alternative arrangement for power supply i.e. Generator.

The overall responsibility of all the above preparatory action may be strictly undertaken by the DEO, Angul under the direction and supervision of the Collector or ADM.

District Administration will take the following immediate steps as preparedness.

- All the field Officers will be kept alert. Those are the BDOs, Tahasildars, MOs, VAS, Police, Industries, Telephone, Agriculture, RWSS, RD, R&B,

ICDS, Irrigation, NESCO, NH, PHD, Municipality, MLAs, MPs, MLs, CI/DI/SIs, Station Director, All India Radio of the district.

- DIPRO shall *inform the media*. Warning shall be issued in the prescribed format:
- All the officers will be called on and they will remain in headquarters immediately after receiving the message.
- A *logbook* will be prepared for recording chronological sequence of events.
- Task force will be formed taking District level Officers to keep watch on the during and after disaster situation and act upon accordingly.
- **Food and Kerosene:**
 - The CSO will check with the field staffs on stock of emergency food in vulnerable pockets prior to any event in sufficient quantity.
 - Check up availability of food (rice, chuda and *Gur*) and kerosene at block headquarters, with storage agents and other inaccessible pockets. BDO shall contact all Storage Agents. They will ensure visiting the god owns and verify the stocks. The Agents shall remain present at the store round the clock. BDOs shall immediately depute one officer to the place where the storage god owns are located.
 - The BDOs should take steps to start movement of food stock and Kerosene Oil from block headquarters to areas that are likely to be cut-off.
 - The CSO under the guidance of the district Collector should start movement of food stock and K. Oil from district headquarters to block headquarters.
- **Health sector:** The CDMO will make a rapid assessment of the following.
 - Check up the stock of medicines, bleaching powder, and halogen tablets. If necessary, immediate requisition will be sent.

- The CDMO will take action to start movement of medicines, bleaching powder, etc. to PHCs/CHCs.
- The Medical Officers will be ensured to be present in places at the PHCs and CHCs contacting police stations, blocks and Tahasildars or even by telephone.
- CDMO shall decide the locations of camps, if required.
- All CDPOs will be teamed up with the MO of PHC/ CHC with their vehicles and supervisors.

- *Vehicles:* One hired vehicle has been engaged in District EOC as per order of SRC, Requisition may be made for small and big vehicles immediately by DEO to RTO, keeping in view the intensity of forthcoming disaster.

- The field Officers will be advised to make requisition for vehicles. Tahasildar, BDO and Police station will take steps on it. For any further support the district control room may be contacted

- **Boats:** Requisition of boats will be made within the district. If necessary Office of the SRC will be contacted for the purpose.
- Sambalpur, Dhenkanal and Keonjhar Collector will be intimated to remain in readiness for *supply of stocks of rice and Chuda*.
- After making an assessment of the seriousness of the emergency, *Educational institutions will be closed* for the period. The Cyclone/ Flood Shelters will be kept ready.
- **Veterinary measures:** Immediately SRC and MD, OMFED will be contacted and the supply of cattle feed will be tied up. CDVO shall make assessment of vaccines and fodder availability.
- **Air dropping zones:** The lat-long book will be used for identification the air dropping zones, if required. An advance list of villages where air dropping may be needed will be kept ready.
- Each JE of RD, R&B, and NH & IRRIGATION shall keep ready a gang of 20 persons (severe cyclone- 40-person gang) with axes and saws. They will

also have one chain-pulley system ready. The volunteers in the other hand also will be kept ready by the district emergency units, NSS, NYK, Scout & Guide, NCC and NGOs.

- *District Level Officers specially in charge of Relief and rescue operation:* At special cases requisition of the services of officers who have been effective in the past will be made and accordingly the allotment of areas will be made to them with full powers of decision-making on the spot. **However the Sub-Collectors will be the special Officers at their Sub-Divisions with full power and decision-making.**
- A thorough assessment of relief items available in stock at different places will be done and accordingly the next requirement by the Civil Supply Department.
- ***Functional distribution of work:***
Following functional distribution of work shall be done. Each team will have staff and resources. The team leader will have full power to take decisions. The teams are:
 - Information Management, Warning dissemination and Office documentation Team.
 - Rescue and Evacuation Team
 - Emergency Health Management Team.
 - Relief Management Team.
 - Transport Management Team.
 - Infrastructure Management Team.
 - Animal Resource Management Team.
- ***Civil Society Organisations:*** Civil Society Organisations will be communicated. They will be alerted with areas/functions. They will be introduced to the field functionaries. They will prepare a list of volunteers. A quick inventory of their resources may be prepared and UNICEF, UNDP, WFP, CARE, OXFAM, Action Aid and other international agencies may be contacted. Quick assessment of district needs and expectations from different agencies will be done. The District Control Room will make the coordination effort.

- **Press briefings:** Press briefings play a very important role in disaster management. Daily press briefs will be issued at 16:00 hours. Written information will be issued. Following format will be used.

Press Note No.		Dated:		
		Total	Affected	Remarks
1	Blocks/ towns			
2	Villages			
3	Population			
4	Severely affected areas			
5	Rescue measures			
	Boats deployed			
	Army/ Navy/ Coast Guard			
	Police/ Fire brigade			
	Other agencies			
	Exemplary events			
6	Relief measures	Qty	Villages covered	Days covered
	Rice			
	Chuda			
	Other dry food			
	Kerosene Oil			
	Polythene sheets			
	Tents			
	Cattle feed			
	Halogen tablets			
	Medicines			
	Air dropping sorties			
7	Casualties			
8	Missing reports			
9	Cattle death			
10	Civil Society Organisations			
11	Damage to property	Number	Approx Value	Remarks
	Roads			
	Embankment breaches			
	Schools			
	Other public buildings			
	House damage			
	Electrical installations			
	Others			
12	Prospects in next 24 hours			

13	Message for people			
14	Other details			

- DIPRO and DEO will take necessary action in flowing message to the Public. Message to public over All India radio or directly with a loud speaker should be specific. Apart from the general warning, it should include the following three points.
 - Take shelter in nearest Pucca building.
 - Keep cattle tied in open spaces.
 - Keep sufficient dry food.
- Regularly contact will be made from the control room to R.D.C., S.R.C., Home Secretary, Revenue Secretary, PS/ Secretary/ Addl. Secretary to Chief Minister, Chief Secretary and Health Secretary etc.
- Written orders will be given for identifying places for starting free kitchens. Issue of clearance will be made at least for 3 days or even more.
- Regularly check up will be made with <http://www.npmoc.navy.mil/jtwc.html> and www.imd.ernet.in and other disaster warning web sites.
- Spare copies of district maps, Jurisdiction maps of all irrigation divisions shall be kept ready in good numbers.
- Mobile phones Nos of Sub-Collectors, other officials, BDOs/ Tahasildars will be kept noted in the control room.
- Contact will be made with State Bank of India for making available VSAT network in case of failure of all communication channels.
- Requisition will be made for all IB/ Rest sheds.
- Requisition will be made of School/ College for army/ police forces.
- All field officers will be directed to hire generators and keep sufficient oil for running them.
- All police stations will be directed to keep spare batteries for VHF.
- Looking at the onset of emergency and after making quick preparations, Emergency meeting of important official and non-official agencies will be conveyed under the chairmanship of the Collector and respectively clear instructions will be given.
- A duty roster will be made so that important Officials cannot breakdown together.

FOR EMERGENCY OPERATION CENTER/DISTRICT CONTROL ROOM, Angul.

EMERGENCY OFFICE, COLLECTORIETE , ANGUL ,Contact no 06764-230980

CHAPTER -10

RESPONSE

RESPONSE

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

RESPONSE MEASURES AT THE DISTRICT:

Steps to be taken immediately on receiving Cyclone / Flood Warning or information about any other Emergency from any source

- Officer in charge of Control Room/ EOC:

The control room is in overall charge of the Collector.

In the absence of Collector, ADM, PD DRDA, Emergency officer or any other officer or staff on duty at that point of time shall remain in charge of Control Room. The person in charge of control room shall be personally responsible for implementing the SOP. She/he shall take all decisions as outlined below and sign for the Collector on all reports mentioned below. She/he shall not wait for orders from anybody.

- Duty in Control Room:

Following staff and officers shall perform duty in Control Room on getting any information from any source about any emergency. Apart from these, other officers or staff who gets the information from any source will be in contact with the Control room.

- Collector, ADM, PD, DRDA, District Social Welfare Officer, Emergency Officer, Sub-Collector Talcher, CDMO, CSO, DIPRO and RTO and all the coordinators of the District level DMTs.
 - All staffs of Emergency Section
 - Getting the Control Room ready

Following preparatory steps will be taken for keeping the control room functional during emergency.

- Shifting/Connecting two phone lines to control room functional. One of the above is the toll free no that is 1077 (from any landline) & 06724-230980 (from any mobile).
- Connecting/functioning of the VHF set in Control room. If required, the police VHF may be in use.
- Charging the battery of inverter, if present in control room or Collector's office or making alternative arrangement for power supply i.e. Generator.

The overall responsibility of all the above preparatory action may be strictly undertaken by the DEO, Angul under the direction and supervision of the Collector or ADM.

District Administration will take the following immediate steps as preparedness.

- All the field Officers will be kept alert. Those are the BDOs, Tahasildars, MOs, VAS, Police, Industries, Telephone, Agriculture, RWSS, RD, R&B, ICDS, Irrigation, NESCO, NH, PHD, Municipality, MLAs, MPs, MIs, CI/DI/SIs, Station Director, All India Radio of the district.
- DIPRO shall *inform the media*. Warning shall be issued in the prescribed format:
- All the officers will be called on and they will remain in headquarters immediately after receiving the message.

- A *logbook* will be prepared for recording chronological sequence of events.
- Task force will be formed taking District level Officers to keep watch on the during and after disaster situation and act upon accordingly.
- **Food and Kerosene:**
 - The CSO will check with the field staffs on stock of emergency food in vulnerable pockets prior to any event in sufficient quantity.
 - Check up availability of food (rice, chuda and *Gur*) and kerosene at block headquarters, with storage agents and other inaccessible pockets. BDO shall contact all Storage Agents. They will ensure visiting the god owns and verify the stocks. The Agents shall remain present at the store round the clock. BDOs shall immediately depute one officer to the place where the storage god owns are located.
 - The BDOs should take steps to start movement of food stock and Kerosene Oil from block headquarters to areas that are likely to be cut-off.
 - The CSO under the guidance of the district Collector should start movement of food stock and K. Oil from district headquarters to block headquarters.
- ***Health sector:*** The CDMO will make a rapid assessment of the following.
 - Check up the stock of medicines, bleaching powder, and halogen tablets. If necessary, immediate requisition will be sent.
 - The CDMO will take action to start movement of medicines, bleaching powder, etc. to PHCs/CHCs.
 - The Medical Officers will be ensured to be present in places at the PHCs and CHCs contacting police stations, blocks and Tahasildars or even by telephone.
 - CDMO shall decide the locations of camps, if required.
 - All CDPOs will be teamed up with the MO of PHC/ CHC with their vehicles and supervisors.

- **Vehicles:** One hired vehicle has been engaged in District EOC as per order of SRC, Requisition may be made for small and big vehicles immediately by DEO to RTO, keeping in view the intensity of forthcoming disaster.
- The field Officers will be advised to make requisition for vehicles. Tahasildar, BDO and Police station will take steps on it. For any further support the district control room may be contacted.
- **Boats:** Requisition of boats will be made within the district. If necessary Office of the SRC will be contacted for the purpose.
- Sambalpur, Dhenkanal and Keonjhar Collector will be intimated to remain in readiness for *supply of stocks of rice and Chuda*.
- After making an assessment of the seriousness of the emergency, *Educational institutions will be closed* for the period. The Cyclone/ Flood Shelters will be kept ready.
- **Veterinary measures:** Immediately SRC and MD, OMFED will be contacted and the supply of cattle feed will be tied up. CDVO shall make assessment of vaccines and fodder availability.
- **Air dropping zones:** The lat-long book will be used for identification the air dropping zones, if required. An advance list of villages where air dropping may be needed will be kept ready.
- Each JE of RD, R&B, and NH & IRRIGATION shall keep ready a gang of 20 persons (severe cyclone- 40-person gang) with axes and saws. They will also have one chain-pulley system ready. The volunteers in the other hand also will be kept ready by the district emergency units, NSS, NYK, Scout & Guide, NCC and NGOs.
- **District Level Officers specially in charge of Relief and rescue operation:** At special cases requisition of the services of officers who have been effective in the past will be made and accordingly the allotment of areas will be made to them with full powers of decision-making on the spot. **However the Sub-Collectors will be the special Officers at their Sub-Divisions with full power and decision-making.**

- A thorough assessment of relief items available in stock at different places will be done and accordingly the next requirement by the Civil Supply Department.
- **Functional distribution of work:**
Following functional distribution of work shall be done. Each team will have staff and resources. The team leader will have full power to take decisions. The teams are:
 - Information Management, Warning dissemination and Office documentation Team.
 - Rescue and Evacuation Team
 - Emergency Health Management Team.
 - Relief Management Team.
 - Transport Management Team.
 - Infrastructure Management Team.
 - Animal Resource Management Team.
- **Civil Society Organisations:** Civil Society Organisations will be communicated. They will be alerted with areas/functions. They will be introduced to the field functionaries. They will prepare a list of volunteers. A quick inventory of their resources may be prepared and UNICEF, UNDP, WFP, CARE, OXFAM, Action Aid and other international agencies may be contacted. Quick assessment of district needs and expectations from different agencies will be done. The District Control Room will make the coordination effort.
- **Press briefings:** Press briefings play a very important role in disaster management. Daily press briefs will be issued at 16:00 hours. Written information will be issued. Following format will be used. Press note Format as above mentioned in Preparedness chapter .(Chapter -7)
- DIPRO and DEO will take necessary action in flowing message to the Public. Message to public over All India radio or directly with a loud speaker

should be specific. Apart from the general warning, it should include the following three points.

- Take shelter in nearest Pucca building.
 - Keep cattle tied in open spaces.
 - Keep sufficient dry food.
- Regularly contact will be made from the control room to R.D.C., S.R.C., Home Secretary, Revenue Secretary, PS/ Secretary/ Addl. Secretary to Chief Minister, Chief Secretary and Health Secretary etc.
- Written orders will be given for identifying places for starting free kitchens. Issue of clearance will be made at least for 3 days or even more.
- Regularly check up will be made with <http://www.npmoc.navy.mil/jtwc.html> and www.imd.ernet.in and other disaster warning web sites.
- Spare copies of district maps, Jurisdiction maps of all irrigation divisions shall be kept ready in good numbers.
- Mobile phones Nos of Sub-Collectors, other officials, BDOs/ Tahasildars will be kept noted in the control room.
- Contact will be made with State Bank of India for making available VSAT network in case of failure of all communication channels.
- Requisition will be made for all IB/ Rest sheds.
- Requisition will be made of School/ College for army/ police forces.
- All field officers will be directed to hire generators and keep sufficient oil for running them.
- All police stations will be directed to keep spare batteries for VHF.
- Looking at the onset of emergency and after making quick preparations, Emergency meeting of important official and non-official agencies will be conveyed under the chairmanship of the Collector and respectively clear instructions will be given.
- A duty roster will be made so that important Officials cannot breakdown together.

FLOOD AND CYCLONE MANAGEMENT PLANNING

5.2.1 Dissemination of Weather and Flood warning:

Flood and Weather warning notices received from Central Flood Forecasting Control Room station at Athamallick in Angul district at river Mahandi and Brahmani Kanhia Rengali & Samal and such other weather warning notices received from Government in Revenue department/ Board of Revenue, will immediately be transmitted to the Control Rooms of the Sub-Collectors by the Control Room/ Emergency Operating Center stationed at District Head Quarter for keeping the people of the areas alert. The Irrigation Control room also will be kept in contact to receive and note down the water level in rivers and dams. The EOC at the district level is equipped with Computer and Internet Connection. During the time the messages are also received directly from the weather web sites for the forecasting of the warning.

The Sub-Collectors will transmit the weather warning or other emergency warning to the Zone Officers and the Asst. Zone Officers. Similarly the Zone Officers transmit it to the Sub-Zone Officers and to the task force members at villages and GPs. Sometimes also the warning information will be transmitted directly to the Sub Zones, villages to alert vulnerable people at the quickest interval. DIPRO of this district will also alert people of their respective jurisdiction through mike, if situation so warrants. The Zone Officers also may take such action to disseminate the warning message through mike if the field situation requires it.

Also in other places the ward members and a few volunteers may be identified for the said purpose. The GP Executive Officer and GP secretary of the vulnerable GP along with these identified volunteers will regularly listen to the warning new broadcast by AIR, DOORDARSAN and will alert the villagers respectively about the forecast of Heavy Rain/ Cyclonic Storm/ Appearance of Flood etc. the Zone Officers concerned have been instructed to keep them alert always.

The following arrangements will be made at the Disaster Warning Dissemination phase:

- The weather warning is to be received and monitored regularly by the DEO/DIPRO at the EOC/ District Control Room.
- For rain forecasting the weather sites will be accessed and monitored regularly and also the Rain Recording at the Block HQ will be monitored daily.

- There will be a close communication with the Irrigation control room (EE, Irrigation) and monitoring of increase in water level and release of water in the Dam Site will be made and accordingly the warning will be disseminated.
- At the release of water from the Dam, the Zone Officers and accordingly the Sub-Zone Officers will be informed to warn the people at downstream side and take necessary actions.
- The CDMO Office will keep close contact with the EOC. They will ensure the information reach to the health workers in the field.
- They will collect information on health status daily and provide necessary feed back to the Collector and EOC.
- From SP office the message will be transmitted to alert the Police force to be vigilant and take hold of the Law and order situations. They should take necessary steps to arrest and take into custody the Rumors mongrels and calm down general public.
- If necessary they may deploy the forces in Calamity area.
- The Emergency Officer and staffs of EOC will immediate inform all the district level officials and also to SRC, OSDMA.

5.2.2 EVACUATIONS AND RESCUE OPERATION:

The Sub-Collectors being the Sub-Division Officers will coordinate with the Zone Officers and Addl. Zone Officers will draw a plan for the sifting and evacuation of the vulnerable population in the district. The Zone Officers will warn the **Search and Rescue team** (special task forces) in the villages to participate actively with them in the operation the Gram Rakhies and Home Guards.

The S.P. and Commandant Home Guards may be contacted by the Zone Officers to deploy required nos of trained persons/ forces for the rescue operation and to maintain law and order and peace keeping during evacuation.

The Zone Officers may arrange boats/ vehicles before the hand for evacuation and rescue operation.

The Zone Officers and the Addl. Zone Officers may immediately contact and coordinate with the Fire Brigade, Police, NCC, NSS, Civil Defence, Scout and

Guide and NGO Volunteers. Rescue materials and Rescue kits may be arranged and kept at the risk points. On contact the Fire Officers, Angul and Talcher will be drafted to the spot immediately soon after getting the information for rescue operation and draw out water accumulation from low laying area. The other Fire Officers at other places also will take similar action if such situation arises in their jurisdiction.

5.2.3 IDENTIFICATION OF BUILDINGS AS CYCLONE AND FLOOD SHELTER:

During high flood some villages of this district get submerged and some others are partly submerged. The marooned people are to be rescued to the nearest safe places for shelter. The places will be notified by the BDOs/ Tahasildars in their Boards and also in the notice board of the GP Executive Officer's Office. The Zone Officers will also give wide publicity regarding these safe places in the areas. Besides, if required, the Zone Officers may also select a few educational buildings or Govt buildings for the purpose of temporary shelter to the Flood/ Cyclone victims. Also there are **Shelter Management Groups** (village Volunteers) at the village level and GP level who will assist in this operation.

5.2.4 RELIEF OPERATION.

At the time of disaster, distribution of relief materials should be organized in planned and disciplined manner so that there will be no irregularity overlooking or overlapping in distribution of relief materials.

The relief teams in the flood prone villages are formed and will associate themselves in smooth distribution of relief materials. From the Block point, the team will be headed by the responsible Block extension Officer and necessary support will be entrusted with the GP Executive Officers as well the GP Secretaries along with the GP level relief team. If necessary the Gram Rakhies and Home Guards will be tagged with each relief party.

The SP and Commandant of Home Guards will be contacted by the Zone Officer to deploy required no of trained personnel to each relief party for smooth functioning of the relief distribution. Also the services of NCC, NSS and NGO volunteers may be requisitioned to help in relief work.

5.2.5 FOOD STUFFS IN INACCESSIBLE POCKETS

The places in the district, which are likely to be worst, affected and inaccessible, are identified and necessary arrangements made. The detail stock of food stuff in accessible pockets is reflected in the list submitted by CSO.

As regards supply of flaked rice (Chuda) steps will be taken to purchase it from local market as well from the neighboring districts like Sambalpur and Dhenkanal. The CSOs of those districts will be requested to arrange stock of Chuda from the Chuda Miller of their district, as there is no such trader is available. For the supply of other such relief goods the CSO, Angul will take necessary steps with the consultation of the Collector to procure from local market or from neighboring districts.

5.3 FIRE MANAGEMENT PLANNING.

Preparedness:

- The Fire Officer is the Officer in Charge.
- Communication will be established with Emergency Operating Center, Police, and CDMO Office etc.
- Regular Staff assessment has been made for 24 hours to meet emergency.
- Trained persons can be engaged to fight out and save the lives against different disasters like Fire accident, Flood rescue, Evacuation etc.
- In intervals the unit will take steps to demonstrate and educate people.]
- Essential equipments and materials are stocked like, Fuel, Masks, Ladders, Life jackets, Life buoys, Foams etc and the vehicle is in good condition.
- A detail list of materials and experts available is mention in previous chapter for reference

CONTROL ROOM:

Fire Department is divided into 8(eight) Circles. Each has a coordinating Office as Fire Station. Every Station is connected with a Phone No and a toll free connection that is functional within that telecom circle. The detail No of the Stations are Mentioned as follows.

FIRE RESPONSE TEAM 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 Volunteer
1	Angul Fire Station	Asst. Fire Station	Asst. Fire Station	06764-230221 06764-230222	9861687881	---
2	Athamallik Fire Station	Station Officer	Station Officer	06763-254101	78944 22618	---
3	Bamur Fire Station	Officer-in-Charge	Officer-in-Charge	9437382410	87636 08763	---
4	Banarpal Fire station	Station Officer	Station Officer-	06764-229300	94385 62445	---
5	Chhendipada Fire Station	Station Officer	Station Officer	06761-252366	94384 69148	---
6	Kaniha Fire Station	Station Officer	Station Officer	8280406665	94385 07743	---
7	Pallahara Fire Station	Station Officer	Station Officer	06765-279223	99381 20830	---
8	Talcher Fire Station	Station Officer	Station Officer	06760-240222	9658705760	---

Fire Station Details in the district :

Sl. No.	Name of the Block/ ULB	No. of Fire Stations	Human Resource (Total No. of Designated Posts at Present) at Each Station Level	Contact Land Line Telephone No. of the Station	Mobile No.	Email Address
1.	Angul ULB	01No.	Asst. Fire Station-01No.	06764-230221 06764-230222	9861687881	Angulfire station19@gmail.com
2.	Athamallik Block	01No.	Station Officer-01No.	06763-254101	7894422618	Nil
3.	Kishorenagar Block	01No. (Bamur FS)	Officer-in-Charge Leading Fireman	9437382410	8763608763	Nil
4.	Banarpal Block	01No.	Station Officer-01No.	06764-229300	9438562445	Nil
5.	Chhendipada Block	01No.	Station Officer-01No.	06761-252366	9438469148	Nil
6.	Kaniha Block	01No.	Station Officer-01No.	8280406665	9438507743	Nil
7.	Pallahara Block	01No.	Station Officer-01No.	06765-279223	9938120830	Nil

8.	Talcher Block	01No.	Station Officer-01No.	06760-240222	9658705760	Nil
	Total	08Nos.				

These control rooms are operational throughout the year and 24 hours with the staffs on duty on rotation.

RESPONSE ACTIONS:

- District Fire Officer at Angul is monitoring the emergency response action consulting with the district EOC and other Fire Stations.
- Receiving the message from any corner by telephone or from any other source of the district, the fire teams are getting ready within instant of time with the required rescue material, experts and vehicle.
- The Fire Station Officer receives the message directly from the field or even they receive message from district EOC to provide support for emergency operation. EOC coordinates with the Fire Officer at Angul and he coordinates with other Fire Station.
- At requirement the total team will split into different sub teams to be engaged in different locality.
- The concern fire rescue team engages it's bridged to the spot directly to provide support action. Then it will intimate the EOC, district authorities for further support to be provided to the affected community.
- The team will take the help of local DMTs during its response action for rescue action. The trained Volunteers will also be engaged in operation under the guidance of the Team leader from Fire bridged Unit.
- At requirement the bridged will take the help of local available material for rescue purpose and even will use the rescue kit available at district and block level. Requiring other rescue materials that are not available the team will coordinate with the EOC. EOC will look into to get support of any such materials from IDRN list or from any other source.
- If the Fire Unit will not be able to provide adequate skill full support in any such Rescue incident, it will intimate the district EOC and it will coordinate

with ODRAF Team or any such other units in the district like INS, Chilka or defence units.

- Local Police will also provide support at the emergency for any such emergency operation.
- The EOC and District Fire Officer will coordinate with the manpower and material support to be required for any rescue activities in the district.

Relief:

- At the emergent relief need the EOC will be contacted for the purpose
- CSO and relief management team will ensure early procurement of dry food and transporting this relief material to the accident place. Prior to this the team will receive the no of persons requiring relief, type of dry food and quantity.
- As per ORC norms the ex-gratia and subsequent other assistance will be provided to the affected families.
- RWSS / BDO will ensure portable drinking water facility to the affected population.

Medical Need:

- CDMO will coordinate with the support service as regards to medical facility.
- Necessary medicines, ORS etc will be provided from AWW, PHC or CHC. The concern PHC or CHC will ensure adequate support in terms of treatment to the injuries.
- If required the mobile medical team from the district will be sent with vehicle and medicine to the spot with immediate attention.
- The victims if serious will be sent to the nearest hospital and if necessary extra medical teams will be procured from adjacent district.
- The team will also guide and coordinate the DMTs at GP/village level for First Aid and allied service.

IEC Activities:

- Posters and leaflets on rescue activities are getting distributed.

- Awareness is made in terms of public meetings and communicating to the volunteers on Flood and Fire rescue measures
- Distributing papers on Does and Don'ts to volunteers and publics.
- Arranging special training programs and communicating such preventive activities.
- Demonstrating by skilled volunteers and experts on rescue activities and arranging mock drill on it.
- The NGOs and other volunteering Units like NSS, NCC, NYK are conducting awareness programs on fire safety tips.

5.4 HEAT WAVE MANAGEMENT PLANNING:

Angul experiences oppressive heat during summer. The maximum temperature varies from 35°C to 47°C in the district. The district is vulnerable to this disaster causing 3nos death causality at an average. A major population being daily labourer and depending on alternate source of livelihood, during the summer often face heat stress. By the years together due to massive awareness activities the vulnerability against heat stress has been reduced to an extent. Still some more precautions are to be carried out against such disaster.

Zoning: -

The district has been divided into 4 zones those are Angul, Talcher, Pallahada . The ADMO, Angul and SDMOs are in charge of respective zones. The ADMO, PH will remain in charge of overall supervision of all activities as nodal person. For any such response against heat stress the cases may be referred to the control rooms opened in the respective zones or either the same may be communicated to the district EOC or Block control rooms.

Control Room: -

Control rooms at District/ Sub-Division/ Block/ Tahasil level shall start functioning immediately for dissemination of heat wave warning received from Revenue Control Room/ S.R.C., Orissa. A control room will be opened round the

clock at Angul District Headquarter Hospital CHCs and PHCs will be in close contact with respective SHH for any critical condition. ORS packets are available at all hospitals and also with Anganwadi Workers.

Preparedness and Response Action:

Medical Arrangements

- At district and 4 Sub-division hospitals arrangements are made for separate ward and beds for heat stroke patients.
- *CDMO will review the patients admitted in the hospitals and treatments taken. The CDMO should take necessary steps to inform and keep alert the health functionaries in the district. He will review the situation in monthly meetings.*
- *ORS will be available sufficient in quantity to the Anganwadi workers.*
- The Blocks are to open outlets to provide drinking water to the general public (JalaChatra) through Grampanchayats and Municipalities. This also may be opened with the help of other humanitarian organizations at need places.
- Functioning of Tube wells at the vulnerable pockets will be ensured.

5.5 ACCIDENT RESPONSE PLANNING:

Reviewing Existing Road and Railway Connectivity of Angul District
Communication Facilities Km / No National Highway (Km) 257 State Highway (Km) 60.50 Major District Road (Km) 134.30 Other District Road (Km) 383.40 Rural Road (Km) 691.04 Forest Road (Km) 458.03 GP Road (Km) 56.70 ,PS Road (Km) 656 Railway Route (Km) 104 Railway Stations (No) 11 Causes high accident prone area. Some other important road network is joining the important points in the district. So many times road accidents are becoming incident in the district. In the past years a few major road accidents claimed some human life losses. Chhendipada and Athammalick block is high area under Road accident.

Response Action: (Information, Rescue and First Aid)

- Information may be received at the district point at the EOC. People can access to the toll free connection that is 1077. Similarly also information may be provided to Medical Control room (Tel No. - 06724-2230980), Police control room –100. Fire control room –101. After receiving the message the EOC will coordinate to inform Police and/ or Fire Unit and also to the Medical Team.
- District Rescue team will proceed immediately to the spot with the rescue kits.
- After reaching at the accident spot will be operational in rescue activities, rescuing the victims from danger.
- Simultaneously the Medical mobile team will be contacted and sent to the spot with adequate medicine for primary health service and First Aid. The team will provide First Aid to the victims, if require, and send them to the nearest Hospital or to the district hospital.
- If required the RTO and transport team will be contacted to provide transit vehicle support to transport rescued victims to the hospital or to the destiny. A mobile Ambulance service from NHM is provided and placed at Each Block by DHFW, for support.
- Requiring any cutting/welding or rescue equipments the EOC may be contacted and it will coordinate from IDRM website or from resource inventory to access the needy equipment and transporting them to the spot within minimum of time.
- If there will be any need of immediate relief, then IRCS District Branch will be contacted to provide dry food and medicine support for the victims. For any long-term relief requirement, CSO will be contacted to provide the requirement.
- The DMT members and trained volunteers (on First Aid and Rescue) will be coordinated at the need of time and will be engaged for the support service.

IEC Activities:

- Posters and leaflets on related activities are getting distributed.

- Awareness is made in terms of public meetings and communicating to the volunteers, students, youths on Road Safety measures.
- Distributing papers and also communicating in the meetings on Does and Don'ts to volunteers and publics.
- Arranging special training programs and communicating such preventive activities.
- Arranging mock drill on it.
- The NGOs and other volunteering Units like NSS, NCC, NYK are conducting awareness programs on Road safety tips.
- A series of training program will be conducted of Truck and Bus (Heavy Vehicle) drivers on road safety measure by the IRCS, district branch.
- Nos. of trainings are organized for youths and school/college students on different road safety signals, knowledge etc. Similarly workshops are also arranged.
- First Aid trainings will be provided to the drivers, conductors, students, youths etc during the commencement of these training programs.

5.6 DROUGHT MANAGEMENT PLAN FOR THE DISTRICT OF Angul: -

Angul lies between 20° 31' N & 21° 40' N latitude and 84° 15' E & 85° 23' E longitude. The total geographical area of Angul is 6232 sq.kms, thus it is the 11th largest district among 30 districts of Orissa.. The climate of the zone is fairly humid with dry and hot summer followed by wet and humid monsoon and mild winter having average normal rainfall 1401.9 mm. The soil of the district is mostly Red Lateritic, Sandy align="justify"align="justify"align="justify"loam & Alluvial in nature. As per the agro climatic condition, it comes under Mid Central Table Land zone in 840.16' to 850.23' east longitude and 200.31' to 210.41' north latitude with 300 mtrs. above mean sea level.Low rain fall causes drought situation in the district .Irrigation facilities are not adequate to provide all the part of land of Angul district.

C. FUNCTIONING OF CONTROL ROOM: -

In order to monitor the natural calamity arising out of flood, cyclone, drought, paste and disease attack, availability of inputs, crop condition and recording of rainfall

situation, the control room will be functioning at range level, agriculture districts and sub-district level having contact telephone numbers is as follows during the entire Kharif season.

CONTROL ROOM (Agriculture) & Contact NO.

DDA Office, Angul 06764-233236

DAO Angul 06764230351

DAO, Talcher

DAO, Athamallick

ADAO, Pallahada

5.7 HEALTHS/EPIDEMICS MANAGEMENT PLANNING.

PREPAREDNESS: -

There are three major disasters like *Flood, Cyclone, drought, earthquake and Epidemics* for which the Medical Unit in the district has a strict vigilance over any disorder situation that may arise.

Zoning: -

The district has been divided into 4 zones those are Angul, Pallahada, Talacher, Athamallick. The ADMO, Angul and SDMOs are in charge of respective zones. The ADMO, PH will remain in charge of overall supervision of all activities as nodal person.

Control Room: -

At district level a control room has been opened with the *telephone no. 06764-* in the office of ADMO, (PH), Angul starting from May 2017 to 30/11/2017 from 8A.M. to 8P.M. to keep liaison and coordinate with other departments of district and state headquarter. The control room will be opened round the clock during disaster. Also in the SDHs, PHCs, CHCs the control rooms are being established and functioning. The CHCs and PHCs are instructed to liaison with the SDMO / Medical

Officer in charge for any health hazard situation arises in their area. Table in DDMP- Volume –II & Discussed above in HRVC Chapter (Chapter -3)

Epidemic Vulnerable Area

However the entire district is vulnerable to epidemics though special attention is given to the above-mentioned place. At any instant of time any place may be vulnerable to any type of epidemics.

Response

M. R. C. (Medical Relief Centre) will be opened at the time of flood emergency at the following places.

MRC Table - In Volume -II

For other types of epidemic at any places of the district the respective CHCs and PHCs, CSR Hospitals will be the MRC and will provide adequate support and service. A strict vigilance from the district point will be followed to those areas during the response period.

Formation of Teams

One Medical team has been formed in the DHH (district headquarter hospital), Angul. The task force team is operating under Orissa Multi-Disease Surveillance system and consisting of M.O. – 1, Sanitary Inspector – 1, HW – 2, LT – 1, Sr Helper/Attendant – 1, with drugs logistics and a vehicle with Driver. The team is kept in readiness always to rush to any place if required.

Similarly at Sub-Division level all the SDHs and at Block level PHCs, CHCs are ready with their response team comprising the same composition of the members as described above to attend any disaster rescue operation.

The district Medical Unit has established *2 no's of mobile teams* that are in all readiness to rush to any affected site of epidemics or natural calamities. Besides this also other medical officers in charge and identified Para-medical staffs are kept alloted to render their service during the time of emergency in the district and if required at other areas of the state.

Reporting

The Medical Unit has one surveillance system to collect the reports of the communicable disease and epidemics from sub-centre level. The same again is compiled at district level and reported through Internet

Sanitation Response

Under SBM Gramin Swachatadoot, VSC looking the cleanness activities at each G.P and Each village & SBM under H&UD Urban Special cleanness drive undertaken and disinfections activities in the district has already been completed. After the flood situation, if required, post flood measures will be taken and properly disinfected.

During any type of disaster response the sanitation measures will be carried out with the support of the experts from medical professionals and the subsequent DMT members and Volunteers at the locality. Bleaching Powder as the material is stocked with AWW and health workers. These workers will provide support towards post disinfections in a right way.

IEC Activities.

Regular IEC activities in terms of rallies, public educations, meetings, workshops, trainings, street plays, and posters are conducted to prevent infectious disease and natural hazards have been done. The flood prone areas have been identified and disinfectants, Halogen tablets, ORS have been kept in those areas with health workers & AWWs .

5.8 ANIMAL RESOURCE MANAGEMENT PLANNING:

Training and awareness:

Training and awareness creation to the field staffs to prevent loss of lives of domestic animals are organized and imparted at the Block level as a part of the committee there.

Control Room:

A control room will be in operation in the office of CDVO, Mbale round the clock during disaster period. The Tel. No. is ---- (06764) 230890, there is also a fax line connected to it.

Similarly, in four Sub-Divisions the SDVOs will be the Zonal Officers, the telephone nos are given below

SDVO, Angul-

SDVO

The VASs at the Block Head Quarter are the Nodal Officers to liason with the BDOs at the time of Natural Calamity or any Disaster likely situation.

Local supplier for supply of cattle feed: -----

Measures already taken for pre monsoon vaccination:-

HSV: -----

BQV: -----

FMDV: -----

Already the vaccination work has been undertaken in pre monsoon.

Shelter for animals:

The animals that are at risk are to be kept safely in the Animal Sick Home. The Veterinary Dispensaries and the places adjoining the rescue shelters will be act for the purpose. At the outbreak, sufficient quantity of fodder (Straw& Rice bran) and drinking water will be stored. A group of volunteers are to be kept in readiness to take up immediate action to rescue and place safely the marooned animals at the Sick Home.

Requirement – One tube well in each Sick Home i.e. Veterinary Dispensary.

First Aid/Medical Group:

The field Officers of this department will be responsible to provide support to the animals suffering, quantity of cattle feed, drinking water, medicine and vaccination at the time of disaster.

Besides special groups of veterinary and Para veterinary persons will be kept ready to proceed to the affected area.

Relief Group:

This group will be there in two ranges for distribution of relief material. 10 qtl of straw and 10 qtl of rice bran are to be kept in 10 different points.

Post Disaster Management:

- Immediate up to date data to be kept in readiness.
- A quick assessment of the damage property and livestock to be listed
- Areas for different levels of relief are to be identified.
- Establishment of communication services to reach in affected places and to provide guidance.
- Preparation of respective plan to reduce the impact of disaster.
- Vaccination for HSV and BQV.
- De-worming of animals.
- Health and Nutritional coverage for affected livestock.
- Planning for economic reconstruction of area.
- Public awareness through NGOs for disposal of carcass.

5.9 PREPAREDNESS & RESPONSE PLAN OF VARIOUS LINE DEPARTMENTS

5.9.3 IRRIGATION

Angul Irrigation Division, Athamallick looks after the maintenance of T.R.E. , O.A.E. and other flood control works of Angul district by one sections such as Angul Irrigation

Vulnerable points:-

The different vulnerable points have been identified under the Angul Irrigation Division on the river bank of rivers Mahandi, Brhamani. Instruction have been issued to take immediate steps to collect the flood fighting materials such as sand and empty cement bags for taking emergency protection measures.

Maintenance of River Gauges/ Discharge observation: -

There are two nos of river gauge stations in Angul irrigation Division, which are maintained by C. W. C., one is at Athamallick of River Mahandi and other is at Kanhia Samal of river Brahamani. Instructions have been issued to take the Zero value of gauges and to mark the danger level and warning level at different gauge stations by painting for correct recording of discharge and gauge level of river and

rainfall data of different raingauge stations at the specified time. The Zero level, Danger level and Warning level of different gauge stations are mentioned.

Danger level at different Locations:

SL. NO	NAME OF THE RIVER	LOCATION OF GAUGE	ZONE VALUE OF GAUGE	WARNING LEVEL	DANGER LEVEL	REPORTING OFFICER
1	Mahanadi	NA	NA	NA	NA	NA
2	Brahmani	NA	NA	NA	NA	NA
3	Tikira	NA	NA	NA	NA	NA
4	Rengali	NA	NA	NA	NA	NA

Opening of flood control room and it's functioning.

Flood control room will function in the circle office and in the division office from 01.06.17 to 30.10.17. the control room will normally function from 6 A. M. to 10 P.M. in normal situation when the rivers are below the warning level and will function round the clock during the period of emergency. The following are the telephones in the control room.

Circle Office 06764-230890

Angul Irr. Division 06764-230890

VHF stations have been installed at Samaml and Rengali Dam Sites.

Response & Reporting of flood damage: -

In case any breaches and damage occurred during flood, the same should be immediately reported to all concerned as well to the office control room. The list of Officials responsible at different locations is mentioned in Capability Analysis Section.

Review of flood responsibility: -

Field staffs as per the distribution of responsibility have been instructed not to leave head quarter and to keep proper watch and ward of the weak and vulnerable points all along the embankment.

Use of wireless and VHF: -

The staffs of the deptt. Are also instructed to use the police wireless, CWC wireless or VHF's installed by OSDMA.

Drainage Clearance: -

The concern Sub-divisional Officers and Junior Engineers have already taken steps in clearance of debris on the water way to make free flow of flood water.

5.9.5 Civil Supplies Office has intimated that in order to meet the emergent requirement during the flood season, at each inaccessible places, rice (280qtl) and kerosene oil (3000 Lts) are kept reserve in all identified places with the respective Storage Agent and Sub-Wholesaler.

5.9.6 RWSS & PHD

They have reported that regularly the technical teams are attending complains against the defunct tub wells. The mobile teams are formed to attend complains on a rotation basis and also on emergency. The necessary materials and Bleaching Powder are stacked at Block points to be used during and at post disaster period.

Executive Engineer, RWSS/PH will be the Officer in Charge-Water Supply.

If essential provisions will be made for the emergency distribution of water.

Provision will be made to acquire storage tanks, and water distribution to the affected villages, population and cattle camps.

During Flood or any disaster the supplied drinking water will be disinfected as per standards and procedures laid down.

People will be informed to store emergency supply of drinking water.

Stand by Diesel pumps/ Generators will be kept ready.

5.9.7 LIFT IRRIGATION

There are 218 nos of Lift Irrigation Projects with an irrigation potential of 5423hectres in Kharif and Rabi in Angul. Out of this 192 LI Projects are functional having the irrigation potential of 4320 hectres.

5.9.8 PWD and Rural Works

The Executive Engineers will be the Officers In Charge.

Inspection and emergency repair will be carried out for all buildings and structures of State Government (including Hospital Building).

Inspection and emergency repair will be carried out for all roads, road bridges, under water inspection of foundation and piers, concrete and steel work.

Heavy equipments and machineries along with vehicles will be secured and kept ready for any required immediate response action.

Equipments, Manpower and material are to be kept ready for road cleaning if necessary and also to construct immediately any temporary road at the affected area.

5.9.9 SESCO

The Executive Engineers will be the Officers In-Charge.

A regular communication will be established with emergency operating center and departmental offices.

Standby arrangements will be made for temporary electric supply for important buildings like Collectorate, Hospitals, Water supply Departments, and Communication Buildings etc.

Equipments, Manpower and material are to be kept ready for restoration of Electric Supply as soon as possible in the affected places.

Preparatory Action by the CRISIS RESPONSE STRUCTURE in the district.

Early warning dissemination

PREPAREDNESS	RESPONSIBILITY
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<input checked="" type="checkbox"/> Setting up control room and manning of Control Room round the clock.	
<input checked="" type="checkbox"/> Assignment of duties to the District level officials and Sub-collectors/ Tahasildars / BDOs	*All District level officials.
<input checked="" type="checkbox"/> Arrangement of vehicle and sound system for information dissemination	All Sub collectors.
<input checked="" type="checkbox"/> NGO coordination and assignment of duty	All Tahasildars.
<input checked="" type="checkbox"/> Proper record keeping and transmission of information to all the levels.	All BDOs
<input checked="" type="checkbox"/> Early warning to fisherman.	DIPRO.
<input checked="" type="checkbox"/> Holding of Natural calamity meeting.	Leading NGOs.
<input checked="" type="checkbox"/> Ensure functioning of warning systems & communication systems.	&
<input checked="" type="checkbox"/> Create awareness with the target groups.	Team members of district level Information Management Teams
<input checked="" type="checkbox"/> Ensure Mock drill.	

EVACUATION

<input checked="" type="checkbox"/> To warn people about the impending danger & to leave for safer places.	All Sub collectors.
<input checked="" type="checkbox"/> To co-ordinate with Civil defence-NGOs/Secy. Rajya Sainik Board/Police for support.	All Tahasildars.
<input checked="" type="checkbox"/> Arrangement of boats/vehicles etc. for evacuation	All BDOs
<input checked="" type="checkbox"/> Evacuate people of marooned areas and administer emergent relief.	DIPRO.
<input checked="" type="checkbox"/> Organize trained task force members.	Leading NGOs.
<input checked="" type="checkbox"/> Deployment of police for maintaining law & order & peace keeping during evacuation	Police.
<input checked="" type="checkbox"/> Mobilize people to go to identified/safer shelters.	&
<input checked="" type="checkbox"/> Deployment of Power Boat/Country Boat	Team members of Rescue and Evacuation Team

(Govt./Private) for evacuation.

Search And Rescue

<input checked="" type="checkbox"/> Deployment of Police/Fire Brigade for search and rescue.	* Police
<input checked="" type="checkbox"/> Co-ordination with the NCC/ NSS/ Civil Defense/Rajya Sainik Board etc. for rescue operation	* Fire Brigade.
<input checked="" type="checkbox"/> Ensure availability of the rescue materials.	* Leading NGO.
<input checked="" type="checkbox"/> Prepare inventory of shelter places and map indicating the shelter centers.	* Tahasildars.
<input checked="" type="checkbox"/> Provide & arrange Rescue kit at risk areas.	* Sub-collectors.
	* BDOs.
	*Programme Co-coordinators of
	NSS/NCC/ Defence units.& Team members of

Rescue and Evacuation Team Shelter Management.

<input checked="" type="checkbox"/> Identification of Shelter/Temporary shelter in high-elevated places and arrangement of tents etc.	*Sub-collectors.
<input checked="" type="checkbox"/> Arrangement of Food/Drinking water /Medicine in the shelter places.	*Tahasildars
<input checked="" type="checkbox"/> Person's allocation for each shelter.	*BDOs
<input checked="" type="checkbox"/> Arrangement of transportation.	*Medical Officers
<input checked="" type="checkbox"/> Arrangement for safe shelter for animals.	*Paramilitary Forces
<input checked="" type="checkbox"/> Providing the lighting facilities for shelter places.	*Police.
<input checked="" type="checkbox"/> Deployment of Police Personnel	*PHD/RWSS.
<input checked="" type="checkbox"/> Temporary supply of safe drinking water.	*RTO/MVI
	& Team members of
	Trasportation
	Manegement and
	Infrastructure
	Management Team

Emergent Relief / Free Kitchen Operation.

<input checked="" type="checkbox"/> Deployment of vehicle.	Sub-collectors.
<input checked="" type="checkbox"/> Procurement and transportation of Relief materials to affected pockets/areas.	DDO Tahasildars BDOs Medical Officers Paramilitary Forces Police. PHD/RWSS. RTO/MVI Leading NGO & Team members of Relief Manegement Team
<input checked="" type="checkbox"/> Arrangement of free kitchen in the shelter camps & affected areas.	
<input checked="" type="checkbox"/> Assigning responsibilities to officials for distribution of emergent relief / running of free kitchen.	
<input checked="" type="checkbox"/> Coordinating with the NGOs /Other voluntary organization & PSUs/UNICEF/ UNDP/REDCROSS./ OXFAM. For continuing Relief Operation.	
<input checked="" type="checkbox"/> Monitoring.	

Medical Aid

PREPAREDNESS	RESPONSIBILITY
<input checked="" type="checkbox"/> Deployment of Medical staff.	* CDMO
<input checked="" type="checkbox"/> Stock pilling of Life saving drugs/ORS packets/Halogen tablets.	* CDVO
<input checked="" type="checkbox"/> Treatment of the injured persons and Transportation of the injured to hospitals.	* SDMO
<input checked="" type="checkbox"/> Awareness messages to stop the outbreak of epidemics.	* SDVO
<input checked="" type="checkbox"/> Disease surveillance and transmission of reports to the higher authorities on a daily basis.	* MEDICAL OFFICERS OF PHC/CHCs.
<input checked="" type="checkbox"/> Vaccination.	* ICDS
<input checked="" type="checkbox"/> Constitute mobile teams and visit the worst affected areas.	* Leading NGOs. * Sarpanches

<input checked="" type="checkbox"/> Dis-infection of Drinking water sources. <input checked="" type="checkbox"/> Identification of site operation camps. <input checked="" type="checkbox"/> To obtain/transmit information on natural calamities to District Control Room. <input checked="" type="checkbox"/> Advance inoculation programme in the flood/Cyclone prone areas. <input checked="" type="checkbox"/> Arrangement of fodder/medicines for the animals <input checked="" type="checkbox"/> Vaccination ,Cite operation camps, Carcasses disposal .	& Team members of Emergency Health Management Team & Animal Husbandry Team
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Health and Sanitation Response structure.

PREPAREDNESS	RESPONSIBILITY
<input checked="" type="checkbox"/> List of the Medical staff members with contact address/telephone number. <input checked="" type="checkbox"/> Stock position of medicines at District /Sub-division/PHC/CHC/AWC. <input checked="" type="checkbox"/> Plan and indent position of stock. <input checked="" type="checkbox"/> Trained voluntary staffs /task forces /Anganwadi workers on use and providing min. Health services to the community. <input checked="" type="checkbox"/> Arrangement of Mobile Health unit for inaccessible pockets/Health awareness campaign. <input checked="" type="checkbox"/> Stock position for medicine for animals <input checked="" type="checkbox"/> Ensuring supply of safe drinking water arrangement for supply of safe drinking water. <input checked="" type="checkbox"/> Disinfectant for purification of water. <input checked="" type="checkbox"/> Arrangement of mobile team and assigning specific operational area for supply of water. <input checked="" type="checkbox"/> Involvement of volunteers/village level workers.	CDMO CDVO PHD RWSS Sub-collectors. Tahasildars BDOs Medical Officers Paramilitary Forces Police PHD/RWSS. RTO/MVI & Team members of Emergency Health Management Team & Animal Husbandry

	Team
--	-------------

Infrastructure Restoration.

<input checked="" type="checkbox"/> Formation of task force with specific equipments. <input checked="" type="checkbox"/> Assigning responsibilities for specific areas. <input checked="" type="checkbox"/> Emergency cleaning of debris to enabled reconnaissance. <input checked="" type="checkbox"/> Coordinate road-cleaning activities to assist local relief work. <input checked="" type="checkbox"/> Begin clearing roads, assemble causal labour provide a work team carrying emergency tool kits. <input checked="" type="checkbox"/> Towing vehicles, Earth moving equipments, cranes, construct temporary roads. <input checked="" type="checkbox"/> Keep National & other Highways clear from disaster effects. <input checked="" type="checkbox"/> Damage assessment <input checked="" type="checkbox"/> Monitoring.	NH authorities R &B Police. PHD/RWSS. RTO/MVI All line departments All Tahasildars. All BDOs. & Team members of Trasportation Manegement and Infrastructure Management Team
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10.11 Preparatory actions to be ensured before the disaster season by district level Officials.

Collector & District Magistrate, Angul.

Proper functioning of Control Rooms to be monitored

Close of breaches and embankments to be ensured

Alternate arrangements to those cut off areas to be planned

Senior Level Officers should be deployed before the areas get cut off

Boats should be deployed

Storage of food (infant food, dry food) in vulnerable pockets to be monitored.

Arrangements for keeping drainage clear to be made

Army assistance to be kept ready

Rescue & Relief measures to be organized

Superintendent of Police, Angul.

- There will not be communication problem
- There will not be law and order situation in the affected areas
- Army and Civil Defense assistance will be required
- Routes might be blocked with carcasses should be cleared
- There will not be a traffic jam on the roads

District Emergency Officer

- Information will be flowing from all sources to the Control Room
- Update information to be received from block level

CDMO

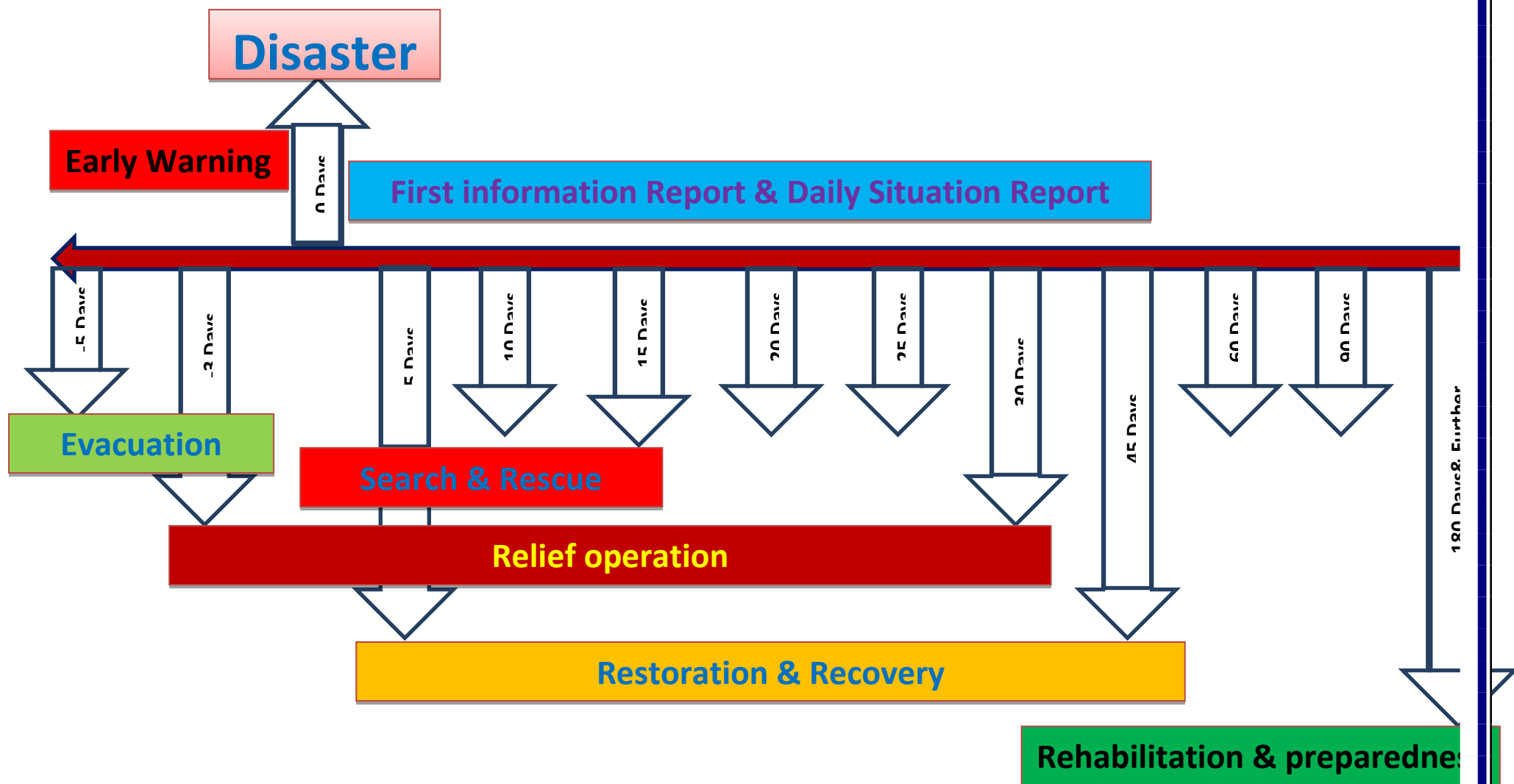
- Outbreak of epidemic or medical emergency as secondary disaster
- Contamination of water and food, requirement of adequate drugs and medical accessories
- Unclean disaster affected site
- Disruption of communication and transport facilities
- Disruption of labs and hospital, urgent need for mental health crisis council for disaster victims
- Disruption of sanitation facilities
- Loss of power and missing people in shelters may increase disease and injury

RWSS

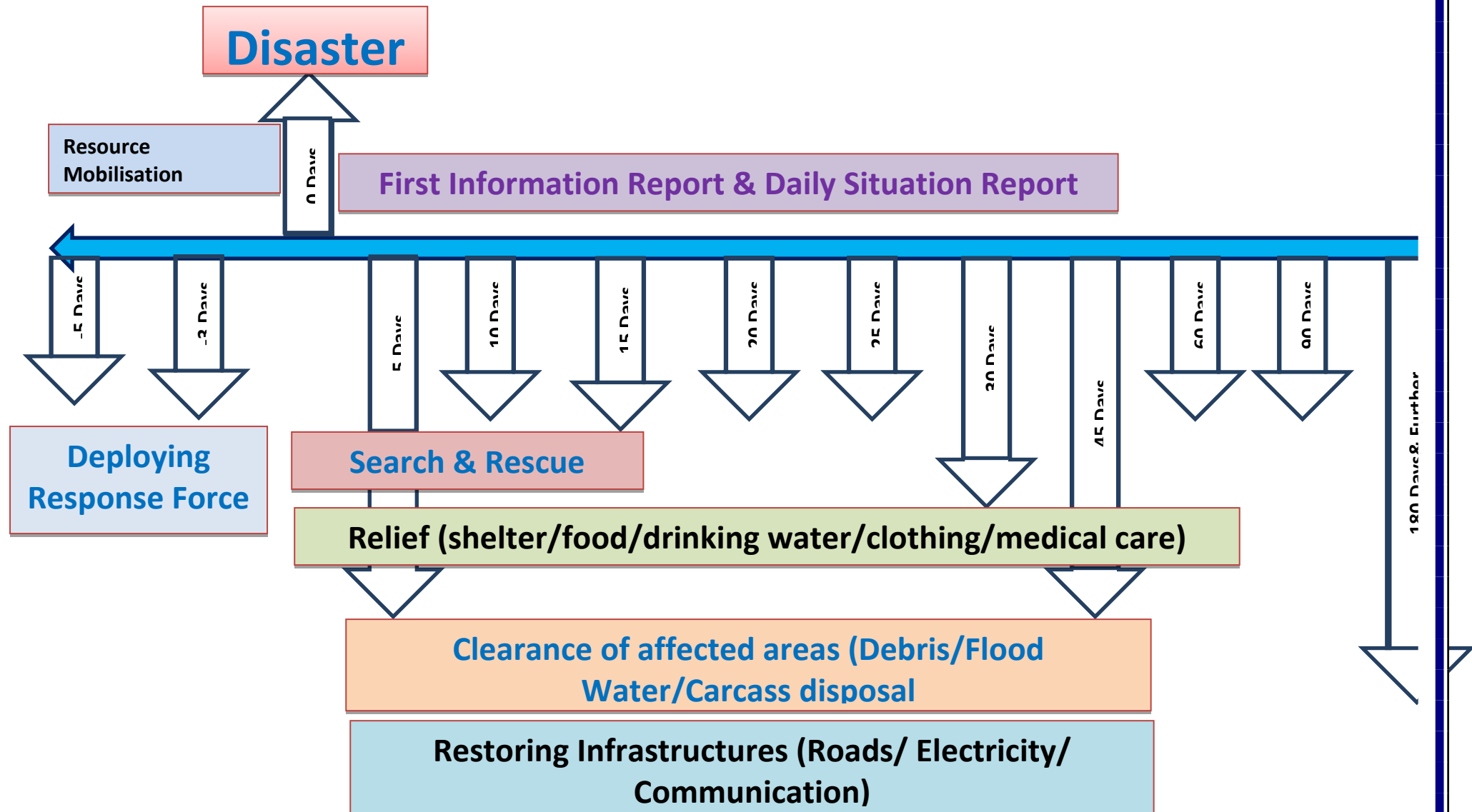
- Most of the water available will be unfit for drinking
- Existing storage bodies of water may be damaged and unusable

- There will be an alternative need (poly packs) of water to assist victims in rescue operation
- People to be informed of emergency supply of water
- Tankers and containers to be acquired for distribution of water

8.1 Phases of Response : Timeline (Indicative)



8.2 Relief Management: Timeline



8.3 RESPONSE

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

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

Task	Activity
	Pregnant & lactating women, Infants & children etc.
Response	<ul style="list-style-type: none"> • EOCs to Ensure back up (Power/Fuel/internet/ Communication at Dist/Dept. & Block levels • Response force under guidance of Nodal officers ensure complete Evacuation (Human/ Animal), carry out Search & Rescue, clear relief lines, • Collector to submit requisition of vehicle/boat/ helicopters & list of support from state & Centre to all concerned authorities • CSO to store required relief materials (Chhuda. Gur, Dry Foods) in the nearby storage points • CDVO to store, transport & distribute required fodders for animals to the affected areas
	<ul style="list-style-type: none"> • Flood /Cyclone shelter committee & Village Disaster management committee to organize free kitchen in the shelters with help of revenue dept. • EE- RWSS & CDMO to ensure supply of drinking water, disinfection of water & maintain Health & hygiene in the shelters • CDMO to carry out First aid & casualty management • Collector to collect & transmit First Information Report (FIR) & Daily Situation Report as per requirement

8.4 Response : Community Level (The list is Indicative & may be extended further as per need & requirement)

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

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

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

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

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

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

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

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

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

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

Name of the Department	On Receiving Warning	Response time	Post Disaster
	<p>dwellers</p>	<p>fallen trees</p> <ul style="list-style-type: none"> • Look the health conditions of wild animals in reserved forests • Immediate arrangement of fodders for animals 	
Railway	<ul style="list-style-type: none"> • Operation of control room • Formation of teams • Keep contact on the vulnerable areas in railway network 	<ul style="list-style-type: none"> • Take steps for immediate restoration of railway lines and establishment of communication • Check the condition of railway lines & traffic signal systems 	<ul style="list-style-type: none"> • Carry out damage assessment • Implement damage restoration activities
EE- Electricity	<ul style="list-style-type: none"> • Contact the District Control Room and assist in their work. • Ensure that all the employees remain present on duty at the Block head quarter. • To assign work to all officers/employees • Ensure to make available the resources available and will establish contacts for the same to deploy those at the time of emergency 	<ul style="list-style-type: none"> • make temporary arrangement for electric supply to the places like hospitals, shelter, jail, police stations, bus depots etc; • Facilitate immediate restoration activities 	<ul style="list-style-type: none"> • Utilize the external resources and manpower allotted to him in a planed manner for disaster management. • To immediately undertake the emergency repairing work .
EE - PHED	<ul style="list-style-type: none"> • Teams are to be formed by EE PHED to attend complains on a rotation basis and also on emergency. 	<ul style="list-style-type: none"> • Facilitate rescue & restoration works • Take immediate 	<ul style="list-style-type: none"> • Carry out damage assessment • Tame immediate repair works of the damage areas for quick supply of

Name of the Department	On Receiving Warning	Response time	Post Disaster
	<ul style="list-style-type: none"> • Take steps for arrangement of Necessary materials and Bleaching Powder stacked at Block points to be used during and at post disaster period. • People to be informed to store emergency supply of drinking water. 	supply of drinking water to the affected areas	drinking water
DEO- School & Mass Education	<ul style="list-style-type: none"> • Instruction to the schools for closing of schools • Instruct HM of schools to hand over keys for shelter purpose if required • Cancel the leaves of staffs 	<ul style="list-style-type: none"> • Facilitate rescue & restoration of works • Inform the damage of school buildings & drinking water situations to the concerned departments • Instruction to use the stock of rice of MDM for relief works if required 	<ul style="list-style-type: none"> • Carry out damage assessment • Instruct to the HM of schools for not using the damaged building for school purposes
DEO - Higher Secondary Education	<ul style="list-style-type: none"> • Formation of teams • Include NSS & NCC volunteers and keep them ready for emergency handle • Keep contact with DEOC 	<ul style="list-style-type: none"> • Facilitate the rescue & restoration works • Involve the NSS , NCC teams in the works • Use of buildings as shelter purposes and relief storage centers 	<ul style="list-style-type: none"> • Carry out damage assessment • Implement restoration works
Fire Officer	<ul style="list-style-type: none"> • Keep alert to all the fire personnel • Cancel leave if any of 	<ul style="list-style-type: none"> • Involve in search & rescue 	<ul style="list-style-type: none"> • Facilitate restoration works • Submit damage

Name of the Department	On Receiving Warning	Response time	Post Disaster
	staffs • Materials required for use in emergency should be kept ready • Keep in touch with officer in fire offices and DEOC • Keep vehicles ready	activities • Communicate with DEOC	assessment reports
EE R & B	• Warnings should be communicated to all Concerned • Operation of control room • Ready of vehicle • Contact with DEOC	• Facilitate restoration works • Photographs of damages to be taken • Report to the DEOC	• Carry out damage assessment • Submit report to the deptt and DEOC • Carry out restoration activities
CSO	• Operate control room in the office • Communicate the warnings at all levels from District to GP / community level • Keep stock of relief material at different points • Keep ready of vehicles & teams	• Facilitate distribution of relief material • Immediate supply of all required materials to the flood shelter centers	• Facilitate restoration works • Submit damage assessment report • Carry out relief works • Contact with DEOC • To establish the new PDS points as per the changed scenario.
Tahasildar/ BDOs	• Disseminate the warning messages to GP and community level • Formation of control room • Cancel leave of all staffs & form team members • Assign areas to nodal persons • Keep relief material & disaster prevention & mitigation , rescue & restoration materials / instruments • Keep informed to DEOC • Regular watch of field	• Facilitate relief & rehabilitation works • Facilitate rescue & restoration • Facilitate & Monitor all the activities at Flood shelter centers • To distribute the relief to the affected families and rehabilitation in the shelter	• Carry out damage assessment & submit report • Implement restoration & development works • Contact with DEOC • Ensure preparation of the recovery and rehabilitation plan as per the Guidelines issued by the SDMA. • To disburse the District Disaster mitigation Fund to different agencies for regenerating the Infrastructure resilient to disaster.

Name of the Department	On Receiving Warning	Response time	Post Disaster
	situations		

Sop for the Departments to be done accordingly

STANDARD OPERATING PROCEDURE (SOP)

ROLE

Role of District Administration:

- Control all emergency operations
- Guide on matters related to policy issues to all key persons
- Provide official information and instructions to the general public

Local Administration is to

- Develop an integrated response strategy based on the available information
- Plan deployment of field units to ensure the availability of appropriate force to deal with the situation.
- Coordinate the functioning of the various agencies
- Monitor the progress till the crisis end and keep the District Administration posted with development.

Role of District Information & Public Relation Department:

To organize public awareness programmes for safety procedures to be followed in an industrial disaster through posters, talks, distribution of working leaflets in Oriya & English containing DO's and DON'TS for individual safety and to protect other.

During crisis:

- Dissemination of information about the nature of incident
- Inform the public through mass media/ public address system regarding emergency measures to be taken, evacuation plans etc. if required
- Endeavour to keep the local people for not to be panic with the news from the gossip mongers.

- Receive calls from media/ public regarding emergency
- Obtain current information from the control room
- Prepare new release
- Maintain contact with hospital and get information about the casualties

Role of Police Department :

Before Crisis :

- Have adequate contingency measures for manpower, transport and communication network to co-ordinate possible incident areas.
- Document traffic control measures and for emergency timings
- Identify access and escape route for emergency

During Crisis :

- Traffic control
- Warning public about the hazards
- Assist evacuation and ensure protection of property in evacuation area
- Assist fire fighting services
- Assist first aid and medical team
- Control security operations
- Carry out any other assigned duties in the incident area

After crisis :

- To protect the evacuated area.
- To assist post disaster rehabilitation programme

Role of Fire Department :

Before crisis:

- To identify access roads and escape routes at hazard prone areas.
- To identify source of water supply,. Considering the possible hazards planning for the adequacy of water supply, if needed.
- Provision of adequate and proper arrangement of Fire Fighting Vehicles.

During crisis :

- Command and control the fire fighting resources in Fire zones.
- Deployment of additional fire sources allocated by control room
- Rescue the victims.

Role of Health Department:***Before Crisis :***

- Arrange for specialized training of doctors of chemical hazards
- Arrange for adequate buffer stock of essential medicine and antidotes
- Identify Ambulance services
- Planning of additional capacity in the base hospital for large scale casualties
- Maintenance of list of blood donors group wise
- Identify First-Aid post, casualty response centre and base hospital

During Crisis:

- Implement organizational response plan in terms of manpower, transport and equipment

Role of Transport Department :

Large number of ambulance and rescue vehicles would be necessary to transport casualties to base hospital and pre evacuation of likely to be affected areas. For this purpose all type of vehicles can be used at short notice.

Before crisis :

- Identify source of availability.

During crisis :

- Requisition and keep vehicles at the disposal of the Control Room.

Role of P.H Department:

In case of water body contamination, large scale cattle deaths, epidemics, loss of flora and fauna can be expected.

Before crisis :

- Analyze possibility of water body contamination due to anticipated hazard scenario and plan out remedial measures.

During Crisis :

- To effect planned response measures
- To warn all concerned about the danger.

The action plan of all individual departments should be compiled together, so that it is readily available to the District Crisis Group. This document should also contain as annexure:

- i. List of hazardous installations
- ii. Inventory of hazardous chemicals handled/ stored at the hazardous installation
- iii. Copies of MSDS of chemical handled/ stored in the district.
- iv. List of contact persons with contact numbers
- v. Any other information considered as necessary for the purpose.

Review and Rehearsal :

The key officials involved in off-site emergency plan need to be exposed to the actual working scenario for a better understanding of their responsibilities. The recent disastrous situation caused by **Breach of Ash pond** in CPP, NALCO has more or less kick started the thought process of emergency planning among all concerned. Periodical mock drill involving the agencies followed by self appraisal meeting will bring out the draw back in the system and would give scope for further improvement. Such periodic drills will refresh the individual responsibilities as well as develop a better co-ordination network. Periodical training of concerned officials on emergency planning and response system will also be taken up for building up an effective emergency response system,. Therefore the following review methods will be taken up.

8.7 Format for First Information Report (FIR)

on occurrence of natural calamity

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

From: District - _____ Date of Report:- _____

To

Special Relief Commissioner, Orissa

State Emergency Operation Centre (SEOC),

Rajiv Bhawan, Ground Floor, Unit-5, Bhubaneswar

Fax No: 0674-2534176, E-mail: relief_sr@yahoo.com/src@ori.nic.in

- a. Nature of Calamity
- b. Date and time of occurrence
- c. Affected area (number and name of affected Blocks)
- d. Population affected(approx.)
- e. Number of Persons
 - Dead
 - Missing
 - Injured
- f. Animals
 - Affected
 - Lost
- g. Crops affected and area(approx. in hect.)
- h. Number of houses damaged
- i. Damage to public property

- j. Relief measures undertaken in brief
- k. Immediate response & relief assistance required and the best logistical means of delivering that relief from State/National
- l. Forecast of possible future developments including new risks
- m. Any other relevant information

Authorised Signatory

District Emergency Operation Centre (DEOC)

District:- _____

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

8.8 Daily Status Report on Relief/ Restoration Measures Undertaken By Departments

1. Health Department.

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

2. R.D. Department.

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

3. FS & CW Department

-Qtls. Chuda, Qtls gur supplied to
Blocks

(Qty .in quintals)

District	Chuda	Gur

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

Blocks

Quantity allocated (in quintal)

Total:

4.Fisheries & A,R.D. Department

- Animals vaccinated-
- Animals treated-

Damages to Roads/River Embakments

1.R.D. Department.

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

2. WorksDepartment.

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

3.W.R Department.

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

DISTRICT DISASTER MANAGEMENT COMMITTEE (DDMC) has been formed under the Chairmanship of District Collector to evaluate the Disaster Preparedness for different type of Calamities at different times over a year that may occur. The Committee is the Pioneer Committee in the District to take stock of the situation, monitors routine preparedness, suggests improving response mechanism and develops a document for disaster management in the District. It sits at least twice in a year as per the Codal Provision of Orissa Relief Code. The Committee members are as follows:

SI No	FUNCTIONARIES	DESIGNATION
1.	District Collector cum District Disaster Manager	Chairman
2.	All MP & MLA of the District	Member
3.	SE Irrigation	Member
4.	Additional District Magistrate (General)	Invitee
5.	District Emergency Officer	Member Convener
6.	Project Director, DRDA	Invitee
7.	Superintendent of Police (Angul&Angul)	Invitee
8.	All Sub Collectors of the District	Invitee
9.	DFO (North & South)	Invitee
10.	CDMO	Member
11.	CDVO	Member
12.	DDO	Invitee
13.	Dy. Director Agriculture	Invitee
14.	All Block Development Officers	Invitee
15.	All Tahasildars	Invitee
16.	Executive Engineers, Irrigation	Invitee
17.	Executive Engineers, Minor Irrigation	Invitee
18.	Executive Engineers, RWSS	Invitee
19.	Executive Engineers, PHED	Invitee
20.	CSO	Invitee
21.	RTO	Invitee
22.	DIPRO	Invitee
23.	District Fire Officer	Invitee
24.	District Level NGO Convener	Invitee Member
25.	Inspector of Factories	Invitee
26.	Representatives of Local Factories	Invitee
27.	GMTD Telephone	Invitee
28.	GM, SOUTHCO	Invitee
29.	Representative of Rajya Sainik Board/ NCC/ NYKS/ NSS	Invitee
30.	CI of Schools & DI of Schools	Invitee
31.	Municipal Commissioner, BMC/All Executive Officers of NACs	Invitee
32.	Representative of Defence Unit	Invitee
33.	District Project Officer (Disaster Management), OSDMA	Facilitator

Optimum strategy is to be maintained by framing a comprehensive District Disaster Management Plan (DDMP) to combat the effects of a disaster and minimize loss of life and property. Different actors from District Administration, Public, NGO sector, Civil Defence, interest groups are monitored to stand in interaction with a view to play a major role in disaster mitigation

I.PRE DISASTER,**II. DURING DISASTER,****III.POST DISASTER**

Pre Disaster	During Disaster	Post Disaster
<ol style="list-style-type: none"> 1. Formation of District Disaster Management Committee 2. Formulation of District Disaster Management Plan for the running year. 3. Hazard Analysis & Resource inventory 4. Allocation of responsibilities to the individual actors/ Groups/ Institutions/ Organizations 5. Broadly defining the responsibilities and operational jurisdiction 6. IEC programme 7. Training and Capacity building 8. Logistic arrangement – Cyclone/ Flood shelters (immediate/ permanent), Food items like Rice, Chuda & Guda, Drinking water, Medical facilities, Clothing, other essential commodities, Communication network, like wireless system/ VHF, HAM-Radio, V-sat, Vehicle and Boat, Power Boat, 	<ol style="list-style-type: none"> 1. Functioning of District Control Room (DCR) & other Sub-Divisional / Block/ Tahasil/ Line Departmental Control Rooms. 2. Dissemination of Warning/ Information 3. Coordination meeting with officials at District Control Room in each 12 hours interval to take stock of the situation, if possible and apprising Revenue Control Room/ SRC/ OSDMA/ RDC 4. Alerting CDMO/ CSO/ RTO/ CDVO/ FIELD OFFICERS (Revenue/ Line Dept.) to remain readiness to gear up into action immediately after abetment of crisis. 5. Immediate freezing of reasonable POL stock with different Petrol Pumps. 6. Rescue operation/ Evacuation by teams (already identified) providing infrastructural facility and movement to rescue centers. 7. Management of 	<ol style="list-style-type: none"> 1. Assessment & enumeration of damage 2. Distribution of Relief/ Emergent Relief as per the provision of ORC 3. Monitoring Relief Operation organized by outside agencies/ UN agencies/ Red Cross/ NGOs/ PSUs/ other states etc. through District Administration. 4. Restoration of Communication - Road & Railways 5. Restoration of Electronic communication system 6. Immediate arrangement of free kitchen in the cutoff/ shelter camps and inaccessible areas. 7. Ensuring transportation of Relief Materials to affected pockets 8. Ensuring safeguarding of belongings of the evacuees 9. Maintenance of Law & Order 10. Ensuring safe availability of Drinking water 11. Provision of medical facilities and minimum sanitation 12. Removal of debris and disposal of carcasses. 13. Helping the evacuees to return to their homes 14. Special care to Children, Lactating Mothers, Old & infirm 15. Meeting Officers of both

Fire Brigades etc. 9. Check memo, Do' & Don'ts	Rescue Shelters 8. Monitoring Disaster Management by ensuring a line of Control through Police & Paramilitary forces, Civil Defence, Fire services, Civilians, PSUs, NGOs and Essential Service Departments by District Collector. 9. Administration of Relief 10. Preparation of Daily Situation Report 11. Check memo	District and Field level in every 24 hours to take stock of the situation. 16. Collection information by a core group of DCR headed by DEO and submission of daily situation report to Govt./ SRC/ OSDMA/ RDC through District Collector 17. Keeping liaison with field and state Govt. and interaction. 18. Documentation of the entire event – Black & White/ Audio & Video 19. Check Memo
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6.2 STANDARD OPERATING PROCEDURE (SOP) OF DISTRICT CONTRL ROOM:

OFFICER IN CHARGE OF THE DISTRICT CONTROL ROOM

The control Room will be function under the direct supervision of Collector, Angul. During crisis in the absence of Collector, Deputy (Emergency), ADM (Revenue), PD, DRDA, District Development Officer, Emergency Officer or any other officers (OIC) on duty at that point of time shall remain in overall charge of Control Room. The person in charge of control room shall be personally responsible for implementing the SOP as indicated hereafter and sign on behalf of the Collector on all reports & act on each point of SOP for effective management of the situation.

a. OPERATIONAL GUIDELINES: DO'S & DON'TS: WHAT TO DO IN THE EVENT OF FLOOD:

DO'S	DON'TS
Regular listening to the Radio/ TV/ Public Addressing System for advance information and advice	Do not enter into flood waters without any support

Disconnect all electrical appliances and move all valuable personal house hold belongings and clothing out of reach of flood water, if you are warned of if you suspect that flood waters may reach the house	Never wander around a flood area
Move vehicles, essential commodities, Farm animals and movable goods to the high elevated place nearby as far as practicable	Do not allow children's to play in or near, flood waters
Turn off gas or may shift it with you if have to leave the house	Do not drive into water or unknown dearth and current
Lock all outside doors and windows before leaving for safer place	Do not eat food or drink water which is contaminated by flood water
If you have to evacuate, do not return until you are advised to do so.	

WHAT TO DO IN THE EVENT OF CYCLONE:

DO'S	DON'TS
Regular listening to the Radio/ TV/ Public Addressing System for advance information and advice	Avoid peeping/ go outside during a lull in the storm
Allow considerable margin for safety	Be away of fallen power lines, damage bridges and structure
A cyclone may change direction, speed or intensity within no time, so stay tuned to the radio/ TV for update information	Do not go out side for sight seeing
Tape up large windows to prevent from shattering/ free flow of wind	Do not relax if there is a lull as it could be the eye of a storm and winds could pick up again
Move to the nearest shelter or vacate the area if this is ordered by the appropriate Govt. Agency	
Stay indoors and take shelter in the strongest part of the house/ society	
Open windows on the sheltered side of the house if the roof begins to lift	
Find shelter if you are caught out in the open	
If you have to evacuate, do not return until you are advised to do so	

Cans, Tins and other implements should not be kept loose, as they may become weapons of destruction during a storm	
Try to remain calm and try to calm others around you	
Let free the livestock	

WHAT TO DO IN THE EVENT OF HEAT WAVE:

DO'S	DON'TS
Listen to the Radio/ TV/ Public addressing system for advance information and advice	Avoid standing under direct sun
Finish the work at the morning or leave it to the evening	Avoiding long drives
Drinking sufficient water & take food before leaving for outside	During unconsciousness, avoid drinking water
Keep your head away from the direct heat. Use wet clothes, Cap, Umbrella or Glasses.	
Keep stock water with you	
Wear light dresses	

WHAT TO DO IN THE EVENT OF DROUGHT:

DO'S	DON'TS
Save water & stock water	Stop misuse of water
Arrange for alternative cropping pattern	
Contact nearest agriculture office	

WHAT TO DO IN THE EVENT OF EARTHQUAKE:

DO'S	DON'TS
Listen to the Radio/ TV/ Public addressing system for advance information and advice.	Do not run and do not wander round the streets
Teach all members of your family how to turn off the electricity, water and gas supply	Keep away from buildings, walls, slopes, electricity wires and cables & stay in the vehicle
Protect yourself by staying under the lintel of an inner door, in the corner of a room, under a table or	Do not rush to the doors or exits never use the lifts keep well away from windows, mirrors, chimneys and

even under a bed	furniture
Keep away from old, tall or ditched buildings, electricity wires, slopes and walls, which are liable to collapsed.	Do not rush to the doors or exists, never use the lift
Stop the vehicle away from building, walls, slopes, electricity wires and cables	Avoid places where there is use electric wires and do not touch any metal object in contact with them
Live your badly damaged house	Do not re-enter badly damaged buildings and do not go near damage structure.
Collect water contenors, food items and ordinary and facial medicines.	

b. ASSEMBLY IN CONTROL ROOM:

Following staff and officers shall assemble in the Control Room on getting any information from any authentic source about any emergency. Apart from these, any other officer or staff, who receives the information from any source, will reach/inform the Control Room immediately for further dissemination / follow up action.

Collector, both ADMs, PD, DRDA, DDO, Emergency Officer, Sub-Collector Talcher, Pallahada, Athmallick, Excise Superintendent, Tahasildar & BDO, DIPRO, CSO, RTO, District Planning Officer.

All staff of emergency section, Nazir of Nizarat section, Stenos to Collector & ADMs & other staff as desired by the Collector/ ADM

c. EFFECTIVE FUNCTIONAL CONTROL ROOM:

Following preparatory steps will be taken up for keeping the Control Room functional during emergency

- Shift one more phone lines to Control Room
- Keep the Radio with new batteries ready.
- Watching of T.V. news on alertness
- Regular listing & Recording of warning transmitted through CWDS and IMD
- Hire 2 more Generator Sets.
- Stock 2 barrels of kerosene and petrol for running the Generator Sets.
- Charge the battery of VHF set.

- Charge the battery of inverter
 - In case of Cyclone warning – arrange four extra batteries.
 - Charge the satellite phone and test it in every interval.
 - Keep 2 nos. of four wheelers ready
 - Ensure availability of the list of identified shelters with route chart list of NGO volunteers/ NCC/ NSS/ Other Youth Volunteers.
- d. ALERT ALL FIELD OFFICERS:

Sub-Collectors, BDOs, Tahasildars, CDMO, CDVO, S.P, Industries, Telephone, Agriculture, RWSS, RD, R&B, ICDS, Irrigation, District Fire Officer, SESCO, NH, PHD, Municipality, MLAs, MPs, Min. CI/ I/ Is, Station Director, All India Radio warning should be informed in the following manner, DIPRO should inform the media.

EMERGENCY WARNING MESSAGE NO.	Dt.
To	
SP/ All OICs of Police Station/ IICs/ BDOs/ Tahasildars/ Sub-Collectors/ CDMO/ SDMOs/ CDVO/ EE R&B Div., Angul I& EE Rural works, Angul I, Angul II/ GM DIC/ DIPRO, EE, Irrigation Divn- Angul, EE Angul North/ South Electrical Division/ Angul/ EOs of Angul Municipality/ All Notified Area Councils/ CI of Schools/ DI schools/ DSWO/ EE RWSS- Angul, EENH, Angul/ EE PHD- Angul, AIR- Angul.	
Info – Superintendent of Police. Angul, / Angul	
(Space for message)	
(Priority)	
CRASH	
Collector Angul	Collector,

- e. CALL UP THE OFFICERS and ensure that they remain in the Headquarters until the situation is normalized.
- f. PREPARE A LOGBOOK for recording chronological sequence of events time to time.
- g. FOOD STUFF & AND KEROSENE OIL
 - Check up availability of food (Rice, Chuda and Jaggery) and Kerosene at Block Headquarters, with storage agents and other incapable pockets. BDOs shall contact all Storage Agents. They shall personally visit the godowns and verify the stocks. The agents shall remain present at the store round the clock. BDOs shall immediately depute one officer to the place where the storage godowns are located.
 - The CSO should be informed to remain alert for procurement of dry foods/ essential commodities on short notice.
 - Direct the Private stockiest/ whole seller and FCI to remain open on all days, including Sundays and holidays, till situation is normalized.
 - Smart movement of food stock and Kerosene Oil from block headquarters to areas that are likely to be cut-off.
 - Place requisition to the RTO for deployment of vehicles.
 - Smart movement of food stock with the help of CSO and K.Oil from District Headquarters to Block Headquarters.
- h. MESSAGE TO PUBLIC over all India Radio should be specific. Apart from the warning, it should include the following three points.
 - Remain alert.
 - Take shelter in nearest Pucca building / Cyclone shelters/ MCS/OBB School & other high elevated places.
 - Keep cattle tied in open spaces/ let free.
 - Keep sufficient dry food.
 - REGULAR CONTACT at intervals with RDC, SRC, OSDMA, IMD, Home Secretary, Revenue Secretary, PS/ Secretary/ Addl. Secretary to Chief Minister, Chief Secretary and Health Secretary.
 - Written orders shall be issued for identifying places for starting free kitchens for at least 3 days.
 - Check up <http://www.npmoc.navy.mil>, and www.imd.gov.in and other web sites.
 - Keep spare copies of district maps. Jurisdiction maps of all irrigation divisions shall be kept ready in good numbers.
 - Place requisition with S.P./OSDMA for supply of temporary VHF sets for CDMO, CDVO, Sub-Collectors, SE-irrigation, DEO & neighboring BDOs/ Tahasildars.
 - Contact Flood Cell, CWC and Indian Meteorology Department (IMD), Bhubaneswar.
 - Requisition all IB/ Rest sheds.
 - Requisition school / College for Army / Police forces.

- Direct all field officers to hire generators and keep sufficient oil for running them.
- Direct all police stations to keep spare batteries for VHF.
- Looking at the onset of emergency and after making quick preparations, convene Emergency meeting of important official and non-official agencies. Give them clear instructions on the above manner.
- Make a Duty Roster of Important Officials for uninterrupted functioning of DCR & immediate implementation of the Relief/Rescue Programme.

PROFORMA FOR 'IN' MESSAGE REGISTER:

Sl. No.	Date	Time of receipt	In Message Sl.No.	Received from	Address to	Message transferred to	Copies to	Mode (WL/Tel/Message) of receipt	Instruction / follow up to be done
01									

PROFORMA FOR 'OUT' MESSAGE REGISTER:

Sl. No.	Date	Time of despatch	Out Message Sl.No.	Related in Message No. If any	Address from	Address to	Copies to	Mode (WL/Tel/Message) of receipt	Instruction / follow up to be done
01									

- i. CHECK AVAILABILITY OF SAND BAGS
Get sandbags from NALCO, NTPC/TTPS/JSPI/MCL/MONNET.

Engineering Division	Sandbags
EE Angul	20,000

J.HEALTH SECTOR: Make a rapid assessment of the following:

- Opening of Health Control Room round the clock
- Check up the stock of medicines, bleaching powder, and halogen tablets. If necessary, send immediate requisition to CDMO.
- Start movement of medicines, bleaching powder, etc. to PHCs/ CHCs
- Ensure that medical officers are in place at the PHCs and CHCs through CEMO, SDMO, Police Stations, Block and Tahasils.
- CDMO shall decide that locations of camps.
- All CDPOs shall be teamed up with the MO of PHC/ CHC/ AHC with their vehicles and supervisors.
- VEHICLES: Requisition of 30 small and 30 big vehicles immediately. Further requisition will be made as per need.
- EMPOWER FIELD OFFICIALS to requisition vehicles. Sub Collectors on behalf of Collector can requisition vehicle (maximum 10) in case of emergency.
- BOATS: Requisition of boats within district. Requisition boats from Athhamalick// Board of Revenue/ Fire Office/ Ports Authority of India.
- Ask CSO & Collector Khurda to remain in readiness for supply of stocks of rice, chuda & other essential commodities.
- Close EDUCATIONAL INSTITUTIONS after making an assessment of the magnitude of the emergency.
- VETERINARY MEASURES: Immediately contact Food mixing center, Angul tie up the supply of cattle feed. CDVO shall make assessment of vaccines and fodder availability.
- AIR DROPPING ZONES: Use the lat-long book for identifying the air dropping zones. Make an advance list of villages where air dropping may be needed.
- Each JE of RD., R&B, NH & IRRIGATION shall keep ready at least a team of 20 persons (severe Cyclone 40- person team) with axes and saw; They will also have one chain –pulley system ready.
- Move the General Manager NALCO/JSPL/NTPC/TTPS for supply of Road cleaners, mobile saw with trained operator.
- Requests the Commander in Chief of Army training Centre, Cuttack/ Superintendent of Police Angul for deployment of army personnel / in rescue operation & maintenance of law & order.
- Requisition the services of officers who have been effective in the past. Allot area to them with full powers of decision making on spot.
- Make a thorough assessment of Relief items available in stock at different places of field as well as District Headquarter.
- FUNCTIONAL DISTRIBUTION OF WORK: Following functional distribution of works shall be done. Each team will have staff and resources. The team leader will have full powers to take individual decisions.
- CIVIL SOCIETY ORGANISATIONS: Get in touch with civil society organizations. Allot them areas or functions. Get them introduced to the field functionaries. Ask them to prepare a list of volunteers.

Make a quick inventory of their resources. Contact UNICEF, UNDP, WFP, CARE, OXFAM, Action Aid and other international agencies. Make a quick assessment of district needs and expectations from different agencies. Make a quick assessment of district needs and expectations from different agencies.

- **PRESS BRIEFING:** Press briefings play a very important role in disaster management. Daily press briefs will be issued at 1600 hours. Written information will be issued. Following format will be used.

Angul District Press Note No.				
SI No		Total	Affected	Remarks
1	Blocks/ towns			
2	Villages			
3	Population			
4	Severely affected areas			
5	Rescue measures			
	Boats deployed			
	Army/ Navy/ Coast Guard			
	Police / Fire brigade			
	Other agencies			
	Exemplary events			
6	Relief measures	Qty/ Beneficiaries	Villages covered	Days covered
	Free kitchens			
	Rice			
	Chuda			
	Other dry food			
	Kerosene Oil			
	Polythene sheets			
	Tents			
7	Cattle feed			
	Halogen tablets			
	Medicines			
8	Causalities			
9	Missing reports			
10	Bovine death			
11	Civil Society Organizations			
12	Damage to property	Number	Approx. value	
	I. Roads			
	II. Embankment breaches			
	III. Schools			
	IV. Other public buildings			
	V. House damage			

	VI. Electrical installations			
	VII. Others			
13	Prospects in next 24 hours			
14	Message for people			
15	Other details			

SCHEDULE FOR UPDATING THE DISTRICT DATABASE;

District Database	Scheduled Time
Updating Rainfall Database	Fortnightly/ Monthly
Updating NGOs/ Voluntary Database	Monthly
Updating important Telephone Nos. Database	Monthly
Updating Shelter Database	Monthly
Updating Weak and Vulnerable points Database	Monthly
Updating Agricultural Database	½ Yearly
Updating Zones & Sub Zones	½ Yearly
River system with Gauge Reading Database	Daily in case of Emgy./ Monthly
Relief Materials Storage Points	Quarterly
Relief Materials Stock Position	Monthly
List of Rescue Equipments	Quarterly
List of Private Equipment Holders	Quarterly
List of Task Forces	Quarterly
List of Resources Personnel in Private	Quarterly
Hazard Calender	Monthly
List of Chemical Hazard Prone Factories	Quarterly
List of Mounds/ Helipads	Quarterly
List of Blocks/ ULBs/ GPs/ Villages/ Population	½ Yearly
Alternate Route Charts	½ Yearly
Animal Population	Yearly
Health/ Police/ Educational Insitute	Yearly
VHF Points	½ Yearly
Vehicle Lists	½ Yearly
List of Boat Points/ Boatmen	½ Yearly
List of Dry Stuffs/ Local Millers	½ Yearly
List of Warning Centers	½ Yearly

SCHEDULE FOR UPDATING PLANS:

Plans	Updating Time
District Disaster Management Plan	½ Yearly (May & November)
Line Departments Disasters Management Plan	½ Yearly (May & November)

CHAPTER -11

RESTORATION & REHABILITATION

9.1 Rehabilitation & Restoration

In the Disaster Management System Actors from different fields such as Political, Administrative, Government, Non-Governmental sectors and Civil Society Organisations have their own role and responsibilities starting from IEC to Rehabilitation or in the Reconstruction process. These Disaster Managers are assigned with specific responsibilities to avoid overlapping of power & confusion in discharging their duties at the time of crisis. The very purpose of this chapter is to coordinate their services for smoother delivery of timely action and delivery of goods or services to the people at the time of their worst suffering. When natural calamities occurred the concerned authority of the area instructed to assess the losses of the disaster whether it is man loss or property loss within 18 hours and report to the Headquarter. Then the Emergency of the District Headquarter complied the report and submits it to Special Relief Commissioner, Odisha, Bhubaneswar. After receiving the allocation from the Govt. financial assistance as per the loss of the people are given to them in a time bound manner as per the norms and assistance of NDRF/ SDRF.

THE INCIDENT ACTION PLAN (IAP).

Management of every incident needs an action plan and proper briefing of all personnel. The purpose of the action plan and briefing is to provide all concerned personnel with appropriatedirections for the various tasks in hand. Before taking up Rehabilitation & Restoration activities, the district Collector /ADM/Emergency officer will need to take stock of the situation, availability and mobilization of resources for listing outthe various tasks and to provide proper briefing to the responders. For this, Collector /ADM/Emergency officer will need to hold a proper briefing meeting at the beginning of each

operational period. At the end of the operational period, a debriefing meeting is equally important where he will be able to again review whether the objectives were achieved or not and then decide what further steps need to be taken in the next operational period. Both the briefing and debriefing meetings are the basis on which the IAP will be prepared and tasks assigned. For the convenience of the IC, a briefing form-Mobile /Toll free number/wereless will be used. The briefing form toll free number can also be used for briefing of senior officers who arrive on the scene. In certain circumstances when important developments take place and further immediate intervention is needed in-between the briefing and debriefing meetings, the IC may issue directions even before completion of one operational period. IAP can be written or oral depending on the duration and magnitude of the incident. The incident may be of low, medium or large levels. Low level incident would be of less than 24 hours, medium would be of more than 24 hours and less than 36 hours and a large incident would be of more than 36 hours of emergency operations. In low or medium level incidents, oral action plan may suffice. The directions given orally may be jotted down by the Command Staff and handed over to the PS to be integrated in the IAP. At times there may be sudden disasters without warning and the IC may have to respond immediately. In such cases also the Command Staff will jot down the decisions taken for response and hand it over to the PS when it is activated and it should be incorporated in the IAP. In larger incidents when there is adequate early warning, a written IAP will be required. IAP may consist of incident objectives, organization assignment and division assignment list, incident communication plan, traffic plan, safety plan and incident map etc.

ORGANISATION OF RELIEF PARTIES FOR RESCUE AND RELIEF OPERATION (Paragraph 60 of O.R.C.)

In the event of floods, it will be necessary to rescue marooned people and distribute emergency relief to the people affected by the calamity. For smooth management of rescue and relief operation, the Sub-Collectors have been instructed to constitute Relief Parties in advance indicating their area of jurisdiction. The employees of the local Government offices shall be included in such relief parties. NGOs will also be involved in the programmed.

ARRANGEMENTS FOR ARMY ASSISTANCE (Paragraph 61 & 69 of O.R.C.)

In case of severe and wide spread calamity, the assistance of army personnel may be necessary for relief and rescue operation. In such contingency, necessary arrangements shall be made to requisition the army to assist the civil authorities through Special Relief Commissioner / Government following the procedure laid down under Paragraph 61 and 69 of the Odisha Relief Code.

FUNCTIONING OF CONTROL ROOM (Paragraph 10 & 47 of ORC)

Control Room is functioning in District Office with telephone No. 230980/234218 & 1077 from 6. A.M to 6 A.M. round the clock with the effect from 1st June and the same will continue till 30th November. Control Rooms are also functioning in the Offices of the Sub-Collectors/Tahasildars/Block Development Officers and in other District Level Officers. Control Room will function round the clock in case of necessity.

WIRELESS STATION (Paragraph 55 of O.R.C)

All the Police Stations and Out-posts including Forest Department offices in the Dist equipped with VHF/HF will transmit the flood /cyclone messages. OSDMA has provided 5nos. of V.H.F. System in the following places.

Sl. No.	District	Sub-Collector	Block
1	Control Room		Angul
2		Athmallik	Athamallik
3			Banarpal
4			Chhendipada
5			Kaniha

6			Kishorenagar
7		Pallahara	Pallahara
8			Talcher

DEPLOYMENT OF POWER BOATS (Paragraph 53 of ORC)

Two Power Boats are kept under Tahasildar Athmallik and similarly two power boats have also kept under BDO, Kaniha for emergency operation.

DEPLOYMENT OF COUNTRY BOATS (Paragraph 55 of ORC)

As per the requirements country boats required to be deployed at different vulnerable and strategic places for eventual relief and rescue operation. Private country boats available locally at different places have to be identified by BDOs/ Tehsildars to be utilized on hire basis in case of emergency. Sub- Collectors and Tahasildars have to make arrangements for deployment of country boats as per the requirement. The Tahasildars and the BDOs shall issue suitable instructions to all the ferry hat lessee to keep their boats in readiness to be used at the time of emergency in the relief and rescue operation. There are 18 nos. of country boats are available in Angul Tehsil.

CRITERIA FOR VULNERABLE POINTS

- (1) Embankment at a specified reach/point having less free board i.e. less than 1.20 mtr. in case of Capital Embankment, other Agricultural Embankment 0.90mtr. in case of Test Relief Embankment.

The river embankments have been divided into readiness and each breach has been kept in charge of an Assistant Engineer/ Junior Engineer.

Rain Recording and submission of rainfall reports (Paragraph 49 Of O.R.C.)

Rain recording stations are available at 04 Sub-Divisional headquarters i.e. Angul, Talcer, Athamalli, & Pallahara and 04 in Block, block headquarters

i.e. Chhendipada, Banarpal, Kaniha and Kishorenagar of the district. The concerned Head Clerks of the Sub-Collector & Block Offices are acting as Rain Recording Officers under the supervision of the respective Sub-Collectors and Block Development Officers.

The rainfall reports from each rain recording station shall be transmitted to the District Control Room daily through V.H.F./Telephone/Messenger.

DISSEMINATION OF WEATHER REPORTS, FLOOD BULLETIN ETC. (PARAGRAPH 52 OF O.R.C.)

Immediately on receipt of weather warnings and bulletin above high flood from the Metrological Center of the Government of India at Bhubaneshwar or from the Revenue Department/ Special Relief Commissioner, the same shall be communicated to the superintendent of Police.

Executive Engineers of the Water Resources Department, the Sub-Collectors, Executive Officers of U.L.Bs., Tahasildars and Block Development Officer who shall without loss of time disseminate the messages among the people through their respective agencies and caution them so that they will be in readiness to shift to flood shelters or other safer places in the event of high floods. The people will also be asked to refer to the special weather/flood bulletin of T.V./Radio during such periods.

DAILY REPORTING OF FLOOD SITUATION (Paragraph 71 of O.R.C)

As per Paragraph 71 of Odisha Relief Code instructions have been separately issued for submission of daily situation report by the Block Development Officer/Tahasildars in the prescribed format through wireless message/Mail/Fax from the date of occurrence of the flood till after 3 days of the abatement of flood. The VLWs and Extension Officers who will furnish the same to the Block Office by 2 P.M. everyday will collect the required flood information. Besides, other line department officers will also pass on the information relating to their department officers who will also pass on the information relating to their department to the respective Block Development Officers.

The Block Development Officers will compile and transmit the information as per the format of the daily situation report through the nearest police wireless by 3 P.M. to District Control Room.

STORAGE OF FOODSTUFF & OTHER ESSENTIAL COMMODITIES IN INTERIOR AREAS (PARAGRAPH 57 OF O.R.C.)

To ensure that food grains/foodstuff are available in the interior areas which are likely to become inaccessible during flood, Civil Supplies Officer, Angul, has been reported to store adequate amount of rice, Kerosene at the vulnerable pockets of the District. Other dry foods like chuda, mudhi, gur, bread, milk powder and other necessities like candle, match box etc, will be arranged immediately for distribution among the marooned people in the event of high floods or cyclones.

SELECTION OF FLOOD SHELTERS (PARAGRAPH 60 OF O.R.C.)

In the flood prone areas, buildings belonging to Government, educational institutions etc. have been selected for providing immediate shelter to the people on evacuation from the flood-affected areas. In case of an emergency, temporary flood shelters shall also be constructed with bamboos, tarpaulins etc. School cum Cyclone Shelters are already constructed and handed over to the concerned school authorities by the Government and other executing agencies like RD, HUDCO, and the PSUs in the District. These can also be used as Shelter places.

LAW AND ORDER

In case of occurrence of any Natural Calamity, there is change of law and order problems. Transportation and distribution of relief materials may require police protection. The Superintendent of Police will issue necessary instruction to all Inspector / Officer/Officer in the District in the direction of maintenance of law and order in such eventuality and to render necessary assistance to the District/Sub-Divisional authorities for smooth management of relief and rescue operation.

TRANSPORT

In the event of any Natural Calamity, vehicles may be required for sending the relief parties and relief materials including foodstuff to the affected areas. The Regional Transport Officer will make requisition and provide such vehicles with the help of his enforcement staff as per the requirement.

DRINKING WATER (PARAGRAPH 64 OF O.R.C.)

There are altogether **9,723** tube wells running at different blocks of Angul District. EE R.W.S & S have already been requested to repair the defunct tube wells in a war-footing manner. Details of Tube Well position in Chapter-II.

DISPOSAL OF DEAD BODIES (PARAGRAPH 73 OF ORC)

The dead bodies of human beings, if any, found in the flood-affected areas in case of high flood, shall ordinarily be made over to their relatives and friends, if available, for cremation or burial. When there are no claimants for dead bodies, those shall be cremated/buried at the Government cost i.e. Health Department. Chief District Medical Officer, Angul will issue necessary instructions to their officer and staff in the field in this regard.

Similarly, carcasses of cattle and other animals shall be buried by the Animal Resources Development Department. Chief District Veterinary Officer will issue necessary instruction in this regard.

ASSESSMENT OF DAMAGE (PARAGRAPH 74 TO 77 OF O.R.C)

Damage caused by any Natural Calamity to the private and public properties and loss of life are assessed by the Revenue Agency. The Tahasildars are to collect such information with the help of his staff through the local enquiry. The Block Development Officers and the Extension Officers in this wok if necessary will assist them and officers may be specially deputed by the Collector to assist the Tahasildars in this work where there is large-scale damage. This report of damages would be submitted without delay. The other departments will similarly assess their losses and submit reports within the stipulated time.

RESTORATION OF COMMUNICATION AND POWER SUPPLY (Paragraph 86 of ORC)

In case of high floods, the communication and power supply to the affected areas are usually cut off. The respective departments will take immediate steps for restoration of the communication as well as power supply after abatement of flood.

OFF-SITE PLAN FOR INDUSTRIAL DISASTER

Growth in industrial activity in the country has resulted in storage, handling and use of various types of chemicals often in large quantities. Many of these chemicals are either Toxic or Highly Reactive & Explosive in nature. Besides petroleum products, 634 such chemicals have been notified as Hazardous substances under the Manufacture, storage and Import of Hazardous Chemicals Rules – 1989 (M.S.I.H.C) framed under Environment Protection Act (EP act)-1986.

These hazardous substances can be source of potential danger to the life, property and environment if not handled properly. Wide spread disasters arising out of toxic release or fire, warrant chemical Disaster management. A contingent plan for mitigation of such disaster is termed as OFFSITE emergency planning. The local authorities are made alert to combat and contain the disaster in a preplanned manner to meet any such eventuality. The Central Government has notified a set of rules entitled “CHEMICAL ACCIDENT (Emergency Planning, Preparedness and Response) Rules, 1996 as complementary to Manufacture, Storage and Import of Hazardous Chemicals Rules, 1996 under Environment (Protection) Act, 1986. This rule provides a statutory back up for setting up of crisis groups in local, districts states and at central level for management of chemical accidents. Under this set up it has been envisaged to set up functional control rooms at districts, state & central level with information networking system. Accordingly District Crisis Group for Angul District is formed by Collector.

Sl. No	Officer	Designation
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	Collector, Angul	Chairman
	Superintendent of Police, Angul	Member
	Inspector of Factories & Boilers, Nalco, Angul	Member Secretary-I
	District Emergency Officer, Angul	Member Secretary-II and Convenor
	District Fire Officer, Angul	-do-
	District Information & Public Relation Officer, Angul	-do-
	Deputy Controller, Civil Defence Officer, Talcher	-do-
	C.D.M.O., Angul	-do-
	E.E, R.W.S &S., Talcher	-do-
	E.E., PH Divn. No.II, Cuttack	-do-
	Regional Officer, Angul	-do-
	Regional Officer, State Pollution Control Board, Angul	-do-
	Deputy Director of Agriculture, Angul	-do-
	Asst. Labour Commissioner, Angul	-do-
	The Deputy Chief Labour Commissioner, (Central), Govt. of India	-do-
	Deputy Controller of Explosives, Rourkela	-do-
	Representatives of M. L. A, Angul / Chhendipada/ Athamallik/Talcher/Pallahara	-do-
	Chairperson, Angul Municipality. Talcher Municipality	-do-
	Representatives of Local Trade Unions	-do-
	Representatives of Industries	-do-
	E.D., NALCO(S & P)NALCO, Angul	
	E.D., NTPC/TSTPS, Kaniha	
	G.M., NTPC/TTPS, Talcher	
	E.D, Jindal Steel & Power Ltd., Nisha, Angul	
	Chief Operating Officer, Monnet Ispat & Power Ltd. Angul	
	E.D., Jindal India Thermal Power Ltd., Derang, Kaniha	

	Director, Utkal Coal Ltd.,(IMFA Group), Angul	
	Director, TATA Sponge Iron Ltd. Angul	
	Chief Executive Officer, Mahaguj Collieries Ltd., Angul	
	Director (Projects), NSL Nagapatnam Power & Infratech Pvt., Ltd., Talcher	

Sl. No	Name of the Factory	Name of Hazardous Chemical involved	Quantity Stored /Handled	Threshold Quantity Prescribed
1	NALCO(CPP) NALCO Nagar, Angul	i. Chlorine ii. Hydrogen	67.6 T 20,365 T	10 T 2 T
2	TSTPP of NTPC Kaniha, Angul	Chlorine	39.6 T	10T
3	NALCO(Smelter) NALCO Nagar, Angul	Acetylene	35 T	5 T
4	TTPS of NTPC Talcher Thermal, Angul	Hydrogen	30 T	2T

Under section 41 B of Factories Act, 1948 and under Rule 12 of Odisha Factories (Control of Major Accident Hazard) Rules 2001, Occupiers of all above factories have drawn up **On-Site Emergency Plans** and detailed disaster control measures for their factories which are already approved by Director of Factories & Boilers, Odisha, Bhubaneswar. The safety measures required to be taken in the event of an emergency have been made known to the workers employed in the factory in particular and the general public in their vicinity at large.

Though the On-site Emergency Plans of above factories and Off-site Emergency Plan for District are distinctly different, they will complement each other. Out of the 4 Major Accident Hazard factories in the district 3 are Power generating industries (Thermal power plants) and other is Aluminum manufacturing unit i.e. NALCO Smelter Plant. From the hazardous chemicals stored/handled shown in above table, anticipated hazards for Off-Site emergency are

- i. Fire
- ii. Release of toxic gases (Chlorine only)
- iii. Breach of Ash dykes.

DISTRIBUTION OF DUTIES TO THE OFFICERS AT THE DISTRICT HEAD QUARTERS

Under the direct supervision of Collector assisted by ADM & PD, DRDA centrally coordinates the whole relief and rescue operations. Immediately on receipt of any natural calamity, from the Radio, News paper, message from the Metrological Center/Revenue Department/Special Relief Commissioner or other reports, the Additional District Magistrates in charge of the respective Sub-Division will either proceed or contact the concerned officers and supervise the relief and rescue operation as the case may be. The following officers at the Headquarters, immediately on receipt of information about any natural calamity will contact the Collector's Control Room and if necessary will attend the following duties:

9. RESPONSIBILITIES OF THE COLLECTOR, SP, ADM, DEO, CDMO, CSO, CDVO, RWSS, PHD, IRRIGATION & OTHER LINE DEPARTMENTS.

Institution	Activities
COLLECTOR / A.D.M/ D.E.O.	<ul style="list-style-type: none"> • Assigning specific responsibilities to different agencies. • Coordination with all line departments & other agencies. • Liaison with Rev. Control Room / OSDMA / SRC/ RDC • And overall view on: • Ensure availability of Vulnerability map of the Block/ Tahasil • Have a list of Resource inventory, Capacity analysis. • List of cut off areas with safe route map for communication. • List of storage facilities, dealers of food. • Control room setup / assignment of control room duty.

	<ul style="list-style-type: none"> • Pre-positioning of staff for site operation centers. • Arrangement of alternative communication / generator sets etc. • Arrangement of vehicles / Boats for evacuation.
SUPERINTENDENT OF POLICE	<ul style="list-style-type: none"> • Communication establishment with District and Block / Tahasil Control Rooms and departmental Offices within the division. • An officer to be appointed as nodal officer on his behalf • Overall traffic management and patrolling of all highways and other access roads to disaster sites • Identification of antisocial elements • Provision of security in transit camps / feeding Centers / relief camps / Cattle camps/ Cooperative food stores and distribution centers. • Providing assistance to district authorities for taking necessary action against hoarders, black marketers and those found manipulating relief material. • Coordination with military service personnel in the area being carried out under relief operation • Providing assistance to the community in organizing emergency transport or injured.
Civil Supply Officer	<ul style="list-style-type: none"> • Identification of inaccessible pockets at Blocks. • Keeping list of whole sell traders of local market. • List of storage agents with quantity of monthly allotment & uptake. • Detail data on beneficiary / Annapurna Scheme • List of Petrol pump dealer • List of Medical Shops.

	<ul style="list-style-type: none">• List of traders dealing with temporary shelters materials.• Diversion of essential commodities to affected pockets as & when requisition.
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CDMO	<ul style="list-style-type: none"> • Communication establishment with District and Block/ Tahasil Control Rooms and departmental offices within the division • An officer to be appointed as Nodal Officer • Stockpiling of live saving, anti-diarrhoeal drugs, de-toxicants, anesthesia, adequate drinking water • Arrangement of ambulance/ generators • In-house emergency medical teams to ensure the adequate staff available at all times to handle emergency casualties • Listing of private health facilities • Strengthening of disease surveillance • Formation of mobile units and ensure communication with them • Identification of sites in probable disaster areas for site operation areas • Awareness generation • All staff informed about the disasters, likely damages and effects
CDVO	<ul style="list-style-type: none"> • Communication establishment with District and Block/ Tahasil Control Rooms and departmental offices within the division • An officer to be appointed as Nodal Officer • Listing of animal population with category • Stock piling of emergency medicines and medical equipments • Arrangement of anesthetic drugs and vehicle to transport of injured animals • Identification of places for opening of operational sites • Stock piling of water, fodder and animal feed • All staff informed about the disasters, likely damages

	and effects
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PHD, RWSS	<ul style="list-style-type: none"> • Communication establishment with District and Block/ Tahasil Control Rooms and departmental offices within the division • An officer to be appointed as Nodal Officer • Arrangement of water tankers and other temporary means of distribution and storage water • Adequate arrangement to provide water to relief camps/ affected villages, alternative water supply arranged in feeding centers/ cattle camp etc. • Disinfections of water bodies • Identification of appropriate portable water supply • All staff informed about the disasters, likely damages and effects.
Irrigation	<ul style="list-style-type: none"> • Communication establishment with District and Block/ Tahasil Control Rooms and departmental offices within the division • An officer to be appointed as Nodal Officer • Activation of flood monitoring mechanism • Methods / communication arrangement of alerting officers on various sites established. • Mechanism evolved for forewarning settlements in the down streams/ evacuation/ coordination with other dam authorities • Identification of materials required for response operations • Repair/ under construction activity are well secured • Water level gauges marked • In late and out late to tanks are cleared • Watch and ward of weak embankments and stock piling of repair material • Guarding of weak embankments • All staff informed about the disasters, likely damages and effects
BDOs/ Tahasildars	<ul style="list-style-type: none"> • Vulnerability map of the Block/ Tahasil • List of cut off areas with safe/ alternative route map • Identification and management of shelter camps • List of storage facilities dealers of food • Control room setup/ assignment of control room duty • Propositioning of staff for site operation centers • Arrangement of alternative communication/ generator

	<p>sets etc.</p> <ul style="list-style-type: none">• Dissemination of warning/ coordination with District Control Room• Ensuring coordination with GP/ RI/ village committee
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SOUTHCO	<ul style="list-style-type: none"> • Communication establishment with District and Block/ Tahasil control room and departmental officers within the division • An officer to be appointed as nodal officer • Standby arrangements for temporary electric supply or generator • Inspection and repair of high-tension lines/ substations/ transformers/ poles etc. • Clearing of damaged poles/ salvaging of conductors and insulators • Identification of materials required for response operation • All staff informed about the disasters, likely damages and effects
Agriculture	<ul style="list-style-type: none"> • Communication establishment with District and Block/ Tahasil control room and departmental officers within the division • An officer to be appointed as nodal officer • Information provided about the disaster and likely damages to crop and plantation • Organized transport, storage and distribution of seeds/ fertilizers/ pesticides • Cleaning operation carried out to avoid water logging and salinity • Surveillance for pests and diseases being carried out • Establishment of public information centers • requirements for salvage or re-plantation assessed damage • Identification of different areas to be affected by different hazards • Listing of irrigation sources with status • All staff informed about the disasters, likely damages

	and effects
Public Works Department	<ul style="list-style-type: none"> • Communication establishment with District and Block/ Tahasil control room and departmental officers within the division • An officer to be appointed as nodal officer • Arrangement of extra vehicles/ heavy equipments, such as front-end loaders/ towing vehicles/ earth moving equipments/ cranes etc. • Inspection and emergency repair for roads/ road bridges/ underwater inspection/ piers/ concrete and steel work • Emergency inspection by mechanical engineer of all plant and equipments • Route strategy for evacuation and relief marked • Clearance of blocked roads • Community assistance mobilized for road clearing • All staff informed about the disasters, likely damages and effects
Telecommunication/ Private Cellular Service Operators.	<ul style="list-style-type: none"> • Communication establishment with District and Block/ Tahasil control room and departmental officers within the division • An officer to be appointed as nodal officer • Standby arrangements for temporary electric supply or generators • Inspection and repair of poles etc. • Identification of materials required for response operations • All staff informed about the disasters, likely damages and effect

7.2 DISTRICT CONTROL ROOM & LINKAGES WITH OTHER CONTROL ROOMS.

Period	Co-ordination & Linkage
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Preparedness	Considering the gravity of situation the Collector shall convene the District Level Natural Calamity (DLNC) Meeting when ever required
Pre-Crisis After Warning	<ul style="list-style-type: none"> • Meeting with District Level Officials/ Officials head quarter and chock out emergency plan with vulnerable areas and resource list • Co-ordination meeting on NGOs/ PRIs • Assignment of duties • Pre-positioning of staff in the likely cut off areas • Arrange food and other basic requirement for emergency response • Collect information from different areas and to act accordingly
During Crises	<ul style="list-style-type: none"> • Co-ordination meeting with officials at HQ. by 12 hrs. Interval and 24 hrs. Intervals with the field officials • Deployment of rescue team in the affected parts • Regular collection of situation report of the risk and vulnerable areas from the officers assign for the purpose • Provision for administering emergent relief and the other basic needs • Contact with Special Relief Commissioner (SRC) for supply of Temporary shelter materials • Keeping inform CSO for supply of food articles procuring from FCI/ Whole sellers • Deputation of volunteers to different probable affected areas • Keep regular link with Revenue Control Room/ SRC/ RDC/ OSDMA etc.
Post Crisis	<ul style="list-style-type: none"> • Helping the evacuees for returning to their houses • Immediate arrangement of free kitchen in the cut off and inaccessible areas • Relief distribution • Monitoring of relief distribution • Provision of safe drinking water • Provision of medical facilities • Repair and restoration of roads and breeches • Transportation of Relief and Human resources • Keep regular link with Revenue Control Room/ SRC/ RDC/ OSDMA etc

7.3 DISTRICT CONTROL ROOM ACTIVITY

NORMAL ACTIVITY	TIME	<ul style="list-style-type: none"> • Organizing IEC activity through walling, Posters, Street Plays, Village task force/ volunteers training emphasizing on insurance coverage of livestock/ crops/
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	<p>industry/ work shop etc.</p> <ul style="list-style-type: none"> • Creating awareness among general public during normal time to ensure human life • Strengthening of weak and vulnerable points in river/ canal embankments • Updating of Disaster Management Plan on the basis of past experience • Inventory of resources (currently resource inventory made on the f IDRN- India Disaster Resource Network format) • Advance preparatory/ mock drills through NGOs/ CBOs on the management of Disaster • Ensure proper functioning of electronic communication systems available • Meeting of NGOs/ CBOs with specific assignment of responsibility in particular sector • Updating District Disaster Management Plan with altered/ addition data • Keeping direct touch with committees entrusted with management of MCSs and other Cyclone Shelters • Updating Telephone numbers • Collection of list of eminent agencies for their involvement at the time of Disaster • Updating of Maps displayed in DCR with up to date information • Review of advance preparation undertaken at field level
WARNING ON OCCURANCE OF DISASTER	<ul style="list-style-type: none"> • Functioning of District Control Room (DCR) & other Sub-Divisional/ Block/ Tahasil/ Line Departmental Control Room • Dissemination of warning/ information • Coordination meeting with officials at District Control Room in each 12 hrs. Interval to take stock of the situation. If possible and apprising Revenue Control Room/ SRC/ RDC/ OSDMA • Alerting CDMO/ CDVO/ CSO/ RTO/ Field Officers (Revenue/ Line Department) to remain in readiness to gear up into action immediately after the abetment of cisis • Immediate freezing of reasonable POL stock with different Petrol Pumps • Rescue operation/ Evacuation by teams (already identified) providing infrastructure facility and movement

	<p>to rescue centers</p> <ul style="list-style-type: none"> • Management of Rescue Shelters • Monitoring Disaster Management by ensuring a line of Control through Police & Paramilitary Forces, Civil Defence, Fire Services, Civilians, PSUs, NGOs and Essential Service Departments by District Collector • Daily stock of the situation by District Magistrate and Add. Dist. Magistrate • Administration of relief • Preparation of Daily Situation Report • CHECK MEMO
ARRANGEMENTS IN THE DISTRICT CONTROL ROOM	<p>Ensure that the DCR is equipped with</p> <ul style="list-style-type: none"> • District Disaster Management Plan • District maps showing identified MCS, School Building cum Cyclone Shelters/ OBB School Building and High elevated places identified as shelters • Vulnerability maps • List of Resource Persons with contact address & Telephone • Data Base on Resource Inventory • First Aid & other basic medical assistance • One retiring room with adequate facilities • Generator sets Emergency light/ Candles etc. • Telephone & Fax • PC in order with printer and modem • Thermometer, Fire extinguisher, White Hard Board & Soft Board
ROLE OF SPECIAL ZONE OFFICER	<ul style="list-style-type: none"> • Immediately after occurrence of disaster the Zonal Officer in charge in the Specific Zone shall proceed to the field • He should make apprise of the situation in brief to the Collector • Shall remain responsible in keeping liaison with Collector/ Sub-Collector/ Tahasildar/ BDO & other non-Govt. agencies entrusted with relief operation

7.4 NGOS & CBOS, MAHILA SMITIS, SHGS, YOUTH CLUB ETC. RELIGIOUS INSTITUTION OR TRUST

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

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

7.6 CRS Partnership

In partnership with Catholic Relief Service (CRS) district administration is working for technical support and service in our district . Mainly CRS is supporting in DDMP,BDMP & VDMC ..

7.7 PRE-DISASTER PERIOD (EARLY WARNING DISSEMINATION) PRE DISASTER PERIOD

PREPAREDNESS	REMARKS
<ul style="list-style-type: none"> • To advise people to leave for identified safer places with their belongs & domestic animals • Evacuation of people with help of rescue kits locally available • Assist in Rescue Operation 	Shall keep direct link with Block administration/ leading NGOs

POST DISASTER PERIOD

PREPAREDNESS	REMARKS
<ul style="list-style-type: none">• To administer / assist in Relief Administration• Arrangement of free kitchen• Supply of safe drinking water• Disposal of debris and carcasses• To watch & ward belongings of evacuees• Educate on Health Care• Cooperate road cleaning activities to assist local relief work• Rehabilitation activities in bringing normalcy	Shall keep direct link with Block administration/ District Administration

7.8 PUBLIC & PRIVATE PARTNERSHIP AND CORPORATIONS:

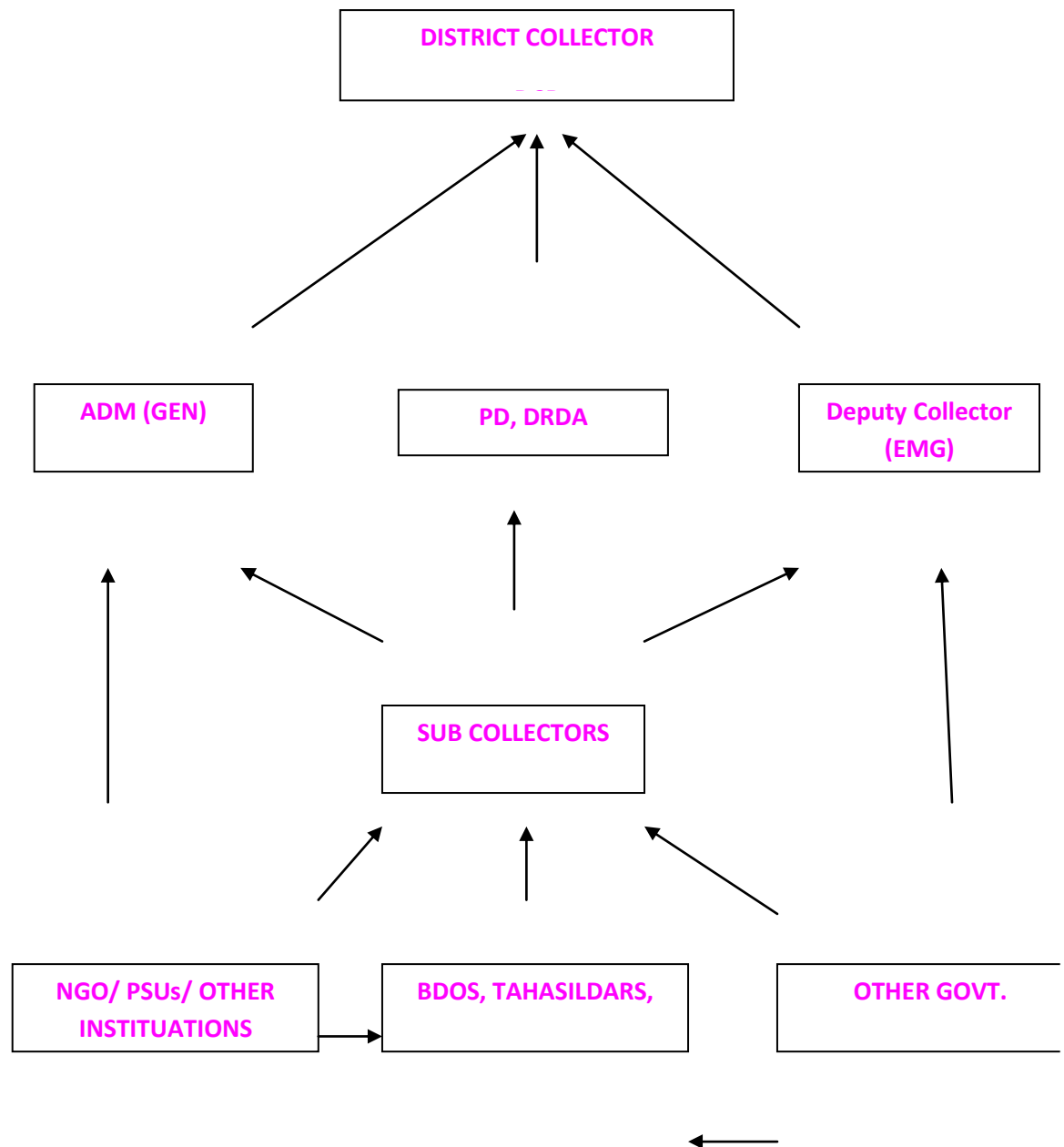
- Public and Private Industries and Corporation has their key role in rehabilitation programme apart from undertaking other relief operation in calamity stricken pockets. In the past events most of the PSUs have rendered their best efforts in restoring normalcy of the livelihood of the people with warm response. Concern to Angul district NALCO, NTPC, TTPS, JSPL, MONNET companies were providing their PP supports to district in during disaster and post disaster.
- The services of PPP Industrial Units shall be sought for especially for immediate post calamity relief operation and providing shelter for the distress both temporary and permanent by the District Administration and shall be implemented under the Direct supervision of ADM & Deputy Collector Emergency.

7.9 ARMED & PARAMILITARY FORCES

The services of Armed and Paramilitary forces shall be best utilized for –Immediate restoration of road communication clearing obstacle,

- To assist in rescue and evacuation of people and settlement in safer sites
- To make best utilization of human resources relief & rescue operation
- To assess and identify alternative route for transportation of relief articles
- To assist in relief operation and maintain law and order situation.

COORDINATION OF MULTIPLE AGENCIES



7.10 POST DISASTER EVALUATION.

Post Disaster Evaluation should be started immediately after abatement of Calamity keeping in view the following factors.

- Statistics on Gravity of the effect of Disaster.
- Sector wise intervention / assistance of state required.
- Coordination linkage with PSUs, NGOs for rehabilitation.

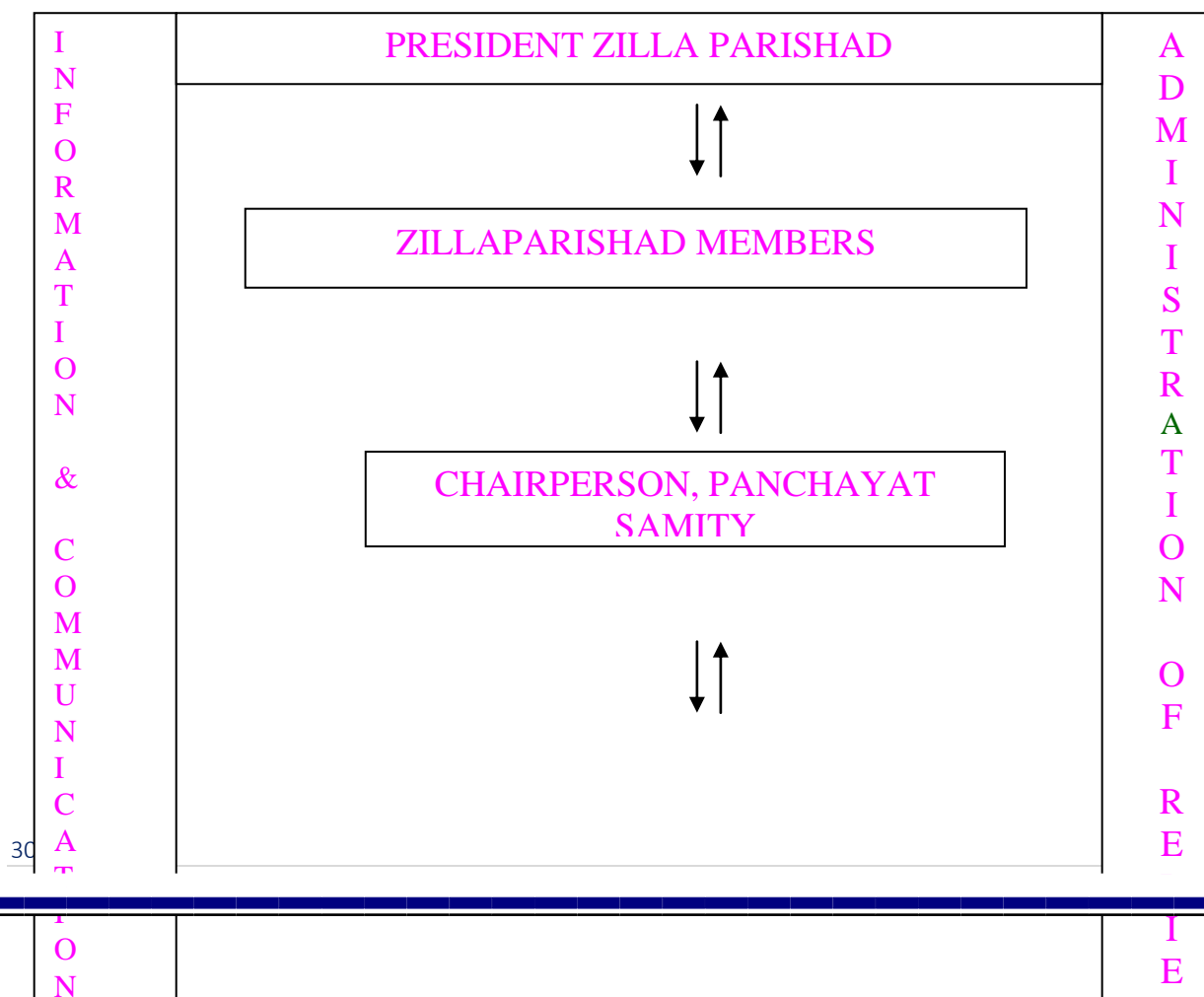
- Documentation
- Monitoring

7.11 PLAN UPDATE-FIXED DATE & RESPONSIBILITY.

The plan shall be updated in the district level Natural Calamity Committee meeting in its first meeting during **April & May** of every year keeping view the past experiences. In the current meeting (on **6th April 2017**) it was found that in **Angul** district the following **blocks are high temperature and Pollution very much prone to Chemical Hazards** drsticaly affecting the livelihood of that area.

The line department Officials, revenue, field functionaries & BDOs are responsible for feeding up-to-date information on each sector of relief operation for incorporating in time in the **DISTRICT DISASTER MANAGEMENT PLAN** to avoid any gaps in the time of operation pertaining to any chemical & Natural Disaster.

7.12 ROLE OF PANCHAYATI RAJ INSTITUTIONS



SAMITI MEMBERS



SARAPANCH



WARD MEMBERS

OFF SITE MANAGEMENT
IMPORTANT TELEPHONE NUMBERS:

Sl. No	Officer	Office	Residence
1.	Collector, Angul	230567	230234
2.	Inspector of Factories & Boilers, Angul Zone-II	220164	220106
3.	Inspector of Factories & Boilers, Angul Zone-I	220164	220106
4.	District Emergency Officer, Angul	230980	
5.	District Fire Officer, Angul	101	231908
6.	District Information & Public Relation Officer, Angul	230462	
7.	Civil Defence Officer, Talcher	242819	
8.	Superintendent of Police, Angul	230316	223500

9.	Chairman, NAC , Angul	230582	
10.	C.D.M.O., Angul	232507	231202 249070
11.	E.E, R.W.S &S., Talcher	240762	240772
12.	Regional Officer Odisha State Pollution Control Board, Angul	236389	
13.	District Agricultural Officer, Angul	230351	230588
14.	Representatives of Factories		
	NALCO(Smelter)		
15.	Executive Director	220110	220149
16.	Chief of HRD	220125	220265
17.	Chief of Medical	220225	220123
18.	Chief Safety Officer	222245	2220813
	NALCO(CPP)		
19.	General Manager	220267	220276
20.	Chief of HRD	220144	220028
21.	Chief of Medical	220225	220123
22.	Chief Safety Officer	220330	220614
	NTPC/TSTPP		
23.	General Manager	243210 243252	243201
24.	Chief of HRD	243344 247150	243034
25.	Chief of Medical	220225	220123
26.	Chief Safety Officer	247582	243118
	NTPC/TTPS		
27.	General Manager	249101	249152

28.	Chief of HRD	249127	249308
29.	Chief of Medical	249029	249257
30.	Chief Safety Officer	249761	249020

Sl. No.	NAME OF HOSPITAL	LOCATION	P & T PHONE
01.	SATABDI HOSPITAL, CMO	DERA	269678
02.	NTPC HOSPITAL, CMO	KANIHA	252234
03.	NALCO HOSPITAL, CMO	NALCO ANGUL	220245/220252
04.	F.C.I HOSPITAL, CMO	VIKRAMPURA	20245/20252
05.	GOVT.HOSPITAL	ANGUL	230333
06.	GOVT.HOSPITAL	TACHER	240226(SDMO)

LIST OF MUTUAL-AID- AUTHORITIES

Sl. No.	AUTHORIRT	ADDRESS	TELEPHONE NO	
			OFFICE	RESIDENCE
01.	ED/NALCO	ED, M/s. NALCO Ltd.	220110	220303
	GM/ TSTPP	Talcher Kaniha, Angul Dt. C/37 PTS		
02.	Sr.Mgr(HR) CMO/MCL	Dera, Talcher (Via) Angul Dist.		(06764) (06764) 243252
03.	GM/TTPS Sr.Mgr(Safety)	Talcher, Angul Dist Talcher, Angul Dist		243201 243107 243172
04.				240182 269184 249101

			249152
			249761
			249020

Review meeting - Once in three months

Mock Drill - Twice in a year (suggested).

DAILY REPORTING OF FLOOD SITUATION (Paragraph 71 of O.R.C)

As per Paragraph 71 of Odisha Relief Code instructions have been separately issued for submission of daily situation report by the Block Development Officer/Tahasildars in the prescribed format through wireless message/Mail/Fax from the date of occurrence of the flood till after 3 days of the abatement of flood. The VLWs and Extension Officers who will furnish the same to the Block Office by 2 P.M. everyday will collect the required flood information. Besides, other line department officers will also pass on the information relating to their department officers who will also pass on the information relating to their department to the respective Block Development Officers.

The Block Development Officers will compile and transmit the information as per the format of the daily situation report through the nearest police wireless by 3 P.M. to District Control Room.

OFF SITE ACTION PLAN FOR THE DISTRICT

The action plan of District Crisis Group can be broadly divided into three groups viz., pre-disaster planning, during disaster planning & post disaster planning.

Pre Disaster-Planning:

- To generate awareness among the people about the precautions and remedial measures to be taken during a chemical disaster.
- To assess the impact of foreseeable disasters in the district by reviewing the on-site emergency plants of MAH installations
- To formulate an “ Off-Site emergency plan”
- To conduct mock drills to reduced response time.
- To identify the areas where local crisis group formation is needed.

During disaster planning:

- To continuously monitor any chemical disaster that may strike.
- To provide authorized information to press and media.
- To combat and contain the disaster
- To bring back normalcy.

Post disaster planning:

- To rehabilitate displaced victims
- To send information to State/Central Crisis Group.
- To assess the shortcomings noticed during disaster management.
- To update the action plan from time to time

Important Actions required during emergency:

- Informing public for necessary self protection measures.
- Evacuation of the affected area
- Protection of the affected area
- Treatment of victims
- Activation combat/ mutual aid/ technical services
- Blocking of roads
- Maintenance of law and order
- Coordination of functioning of various agencies

OFFSITE PLAN:

The planning for emergency response required clear cut understanding of the individual responsibilities and due coordination among the responders. The understanding is to be facilitated through interaction and close working for devising and updating plan. Hence as a pre-requisite the District Crisis Group has been notified vide the District Office Notification No. 2187 dated 11.11.02 under the Chairmanship of the District Magistrate, Angul.

As discussed earlier, there are only hazards of fire, toxic release (Chlorine) and breach of ash dykes. All the factories having fire hazards are self sufficient to combat fire for On-Site and Off-Site Emergencies. There is also mutual aid system among all the 4 Major Accident Hazard units. Besides District Fire brigade and Talcher will also help them.

For leakage of Ammonia (NH₃)

- Not to be in panic
- To use wet cloth on nose
- To move in the opposite direction of the wind flow
- To remain indoors shutting the doors and windows
- To remain under shower
- Wash the effected portion of the body thoroughly, if in contact
- Drink plenty of water
- Wash the eyes for 15 minutes thoroughly, if in contact
- As NH₃ is lighter than air, it goes up and dissipates into atmosphere. Hence

people are to move from top floors to ground floor and lie down

- To remove the casualty to hospital in case of excessive inhalation for treatment and pathological examination

CHLORINE:

Properties:

It is greenish yellow, heavy gas with suffocating odour, extremely strong oxidising agent, non combustible air, but most combustible materials will burn in chlorine as they do in oxygen.

Uses:

Used as bleaching agent, intermittent in manufacturing of plastics, medicines, synthetic rubber, insecticides, herbicides etc. and for purification of water.

Nature of hazards:

- Toxic
- Severe poisoning perhaps fatal when inhaled
- Symptoms may develop after several hours
- Liquid causes severe damage to eyes, skin and air passage
- Contact with moist air produces corrosive fumes
- The gas is heavier than air and spreads along grounds
- Oxidizing agent

During transportation:

- Move vehicle to open ground and consult expert immediately
- keep public away
- Keep upwind
- Put on protective equipment

Spillage:

- Prevent liquid entering sewers
- Contain leaking with sand or earth
- Warn population
- Use water spray to "knock down" vapor
- Do not use water jet on a leak of the tank

Fire:

- Keep containers cool by spraying with water, if exposed to fire
- Do not use water jet directly on leak.

First Aid

- If substance has gone into the eyes, immediately wash out with plenty of water for at least 15 minutes
- Remove contaminated clothing and wash affected skin with plenty of water
- In case of contact with liquid wash affected part with water, then remove clothes carefully
- Keep patient warm
- Allowed drinks if desired.

If inhaled: If patient is conscious:

Take him to a quiet place and keep him with head and chest elevated, loosen the clothes and keep body warm by wrapping him in blankets. Give tea, coffee, milk. Inform doctor or take the patient to the hospital immediately.

If unconscious:

Arrange for patient to be seen by doctor, as quickly as possible. If breathing has stopped or show signs of failing, start artificial respiration.

Medical Management:

Absorption: Mainly through inhalation, contact
Pathology: Irritant

SIGNS AND SYMPTOM

Acute exposure:

Irritation of eyes, nose and throat may progress, burning pain, chest pain and lacrimation, nausea and vomiting, following harshness of voice, salivation and rhino rhea appears. Cough hemoptysis (urine burn) cyanosis follows pulmonary oedema may appear.

Chronic exposure:

Chronic exposure or concentration of 5 ppm results in bronchial and respiratory disorders Chlorine concentration (ppm)	Effects
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0.03-3.5	Range of reported odour thresholds
0.5	Slight odour
1-3	Slight irritation
3-6	Irritation of throat, nose burning of eyes, lacrimation, sneezing, coughing, bleeding of nose or blood tinged sputum
>6	Severe irritation
14-21	Dangerous for 30-60 minutes
35-40	Lethal for 6- to 90 minutes

Investigations:

Lung function test:

- Decreased vital capacity, decreased defusing capacity and increased elastic work of breathing
- Radiographs of chest may show congestion, consolidation and nodulation
- Pulmonary oedema may be seen in severe cases.

Medical Treatment in Hospital:

- Irrigate eyes with water
- Rest
- Oxygen with intermittent positive pressure breathing apparatus
- Use of nebulized bronchodilators and decongestants
- Codeine for cough
- Cortisone
- Symptomatic and supportive.

Progress and Prognosis:

- Disability usually does not last longer than 12-24 hours in mild cases.
However, patient should be kept under medical observation for at least 48 hours as pulmonary oedema may develop.
- Respiratory problems may persist in some workers for 12-24 hours.

Important action required for Off-Site Plan:

Establish off site control room at an easily accessible and with an efficient and reliable communication system and monitor for

- i. Activating fire fighting services
 - ii. Informing public for the necessary self protection measures in the expected affected areas.
 - iii. Maintenance of law and order situation
 - iv. Evacuation of affected areas for safer places to establish assembly points and arranging for necessary relief measures
 - v. Vehicle requisition of requirement
 - vi. Activation of mutual aid system and technical services
 - vii. If portions of highway is coming in the affected zone, to stop traffic movements from a safer distance.
 - viii. Rescue the victims
 - ix. To forecast weather conditions on regular basis
 - x. To activate and identify medical service, hospital, health care by way of keeping adequate stock of life saving medicines as described in the MSDS and to provide in time medical treatments to the affected persons.
 - xi. In case of possibility of water body contamination, public health engineering service to take necessary remedial measure and to warn the public for necessary precautionary measures.
 - xii. Regular reporting to Government on day to day basis
 - xiii. Releasing authorised statements to press and media services
 - xiv. To establish long term clean up measures
 - xv. Post emergency activities including award of relief under the Public Liability Insurance Act 1991,
-
- A. ACTION PLAN FOR HANDLING OFF SITE EMERGENCY
 - B. OFF-SITE EMERGENCY PLAN PREPARATION
 - C. ROLE OF EMERGENCY OFFICER
 - D. ELEMENTS OF OFF-SITE DISASTER CONTROL FOR REDUCING INJURY TO PUBLIC

9.2 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					

9.1 Calculation of assistance for agricultural input subsidy-SMF (Rs. In lakh)

Name of the Block	Area held by SMF (in Hectares)	Total Agricultural area Affected [in Hect.]	Total agricultural area where crop loss is > 50%	Crop loss 33% & above			Expenditure incurred			Total
				Irrigated [in hect.]	Rainfed [in hect.]	Perennial	Irrigated @ Rs.13,500/- per hectare	Rainfed @ Rs.6800/- per hectare	Perennial @ Rs.1000/- per hect.	

[illegible]

**2 Agricultural input subsidy- Farmers other than SMF Farmers affected first year
(Rs. In lakh)**

[illegible]

5										
Total										

Farmers affected by successive calamities

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

(Rs. In

[illegible]

Sl	District	Fully Damaged		Damaged/		Severely		Partially (15% & More)				Huts		Cattle shed attached with house		TOTAL
		Plain Areas		Hilly Areas												
		Amount @ Rs.- Pucca	Amount @ Rs.- Kutcha	Amount @ Rs.- Pucca	Amount @ Rs.- Kutcha	Amount @ Rs.- Pucca	Amount @ Rs.- Kutcha	Amount @ Rs.- Pucca	Amount @ Rs.- Kutcha	Nos.	Amount @ Rs.- Nos.	Nos.	Amount @ Rs.- Nos.			
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																
15																
TOTAL																

Contd.

9.1 Assistance sought for repair /restoration of damaged houses

(Rs. In Lakh)

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

[illegible]

Tot al									

9.8 Extent of damage due to natural calamities

st : Angul

Nature and period of natural calamity : 2016-17

Sl.	Item	Details
1.	Total number of Blocks in the district	
2.	Number and names of Blocks affected	
3.	Number of villages affected	
4.	Population affected (in lakh)	
5.	Total land area affected (in lakh ha.)	
6.	Cropped area affected (in lakh ha)	
	i) Total cropped area affected	
	ii) Estimated loss to crops (Rs. in lakh)	
	iii) Area where cropped damage was more than 33%	
7.	Percentage of area held by SMF	
	i) In the State as a whole	
	ii) In the affected districts	
8.	House damaged	
	a) No. of houses damaged	
	i) Fully damaged pucca houses	
	ii) Fully damaged kutch houses	
	iii) Severely damaged pucca houses	
	iv) Severely damaged kutch houses	
	v) Partly damaged houses (pucca + kutch)	

	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	

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

(Rs. In lakh)

Sector	Damage in physical terms	Requirement of funds for repair of immediate nature	Out of (3), amount available from annual maintenance budget	Out of (3), amount available from related schemes/ programs/ other sources	Out of (3), amount proposed to be met from CRF/NC CF in accordance with list of works indicated in the Appendix to the revised

						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	No of Roads damaged in river embankments– Length of Road damaged in river				

		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 -				
	Canal Embankments	No of breaches – Length of breach in Km – No of partial damage -				
	Minor Irrigation 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 -				
PHCs	PHCs	No of Primary Health Centres damaged -				
Community	Community	No of Panchayat Ghar/Community Hall				

owned by Panchay ats	AWW Centres	No of Anganwadi Centres damaged -				
Power	Electrica l lines	No of Primary sub- stations damaged – 33 KV lines damaged – 11 KV lines damaged – Distribution Transformers damaged – LT lines damaged –				
Total						

STANDARD OPERATING PROCEDURE (SOP)

ROLE

Role of District Administration:

Control all emergency operations

Guide on matters related to policy issues to all key persons

Provide official information and instructions to the general public

LOCAL ADMINISTRATION IS TO

Develop an integrated response strategy based on the available information

Plan deployment of field units to ensure the availability of appropriate force to deal with the situation. Coordinate the functioning of the various agencies

Monitor the progress till the crisis end and keep the District Administration posted with development.

Role of District Information & Public Relation Department:

To organize public awareness programmes for safety procedures to be followed in an industrial disaster through posters, talks, distribution of working leaflets in Oriya & English containing DO's and DON'TS for individual safety and to protect other.

DURING CRISIS:

Dissemination of information about the nature of incident

Inform the public through mass media/ public address system regarding emergency measures to be taken, evacuation plans etc. if required

from the gossip mongers.

Receive calls from media/ public regarding emergency

Obtain current information from the control room

Prepare new release

Maintain contact with hospital and get information about the casualties

ROLE OF POLICE DEPARTMENT :

Before Crisis :

Have adequate contingency measures for manpower, transport and communication network to co-ordinate possible incident areas.

Document traffic control measures and for emergency timings

Identify access and escape route for emergency

DURING CRISIS :

Traffic control

Warning public about the hazards

Assist evacuation and ensure protection of property in evacuation area

Assist fire fighting services

Assist first aid and medical team

Control security operations

Carry out any other assigned duties in the incident area

AFTER CRISIS :

To protect the evacuated area.

To assist post disaster rehabilitation programme

Role of Fire Department :

Before crisis:

To identify access roads and escape routes at hazard prone areas.

To identify source of water supply,. Considering the possible hazards planning for the adequacy of water supply, if needed.

Provision of adequate and proper arrangement of Fire Fighting Vehicles.

During crisis :

Command and control the fire fighting resources in Fire zones.

Rescue the victims.

Role of Health Department :

Before crisis :

- Arrange for specialized training of doctors of chemical hazards
- Arrange for adequate buffer stock of essential medicine and antidotes
- Identify Ambulance services
- Planning of additional capacity in the base hospital for large scale casualties
- Maintenance of list of blood donors group wise
- Identify First-Aid post, casualty response centre and base hospital

During crisis :

Implement organizational response plan in terms of manpower, transport and equipment

Role of Transport Department :

Large number of ambulance and rescue vehicles would be necessary to transport casualties to base hospital and pre evacuation of likely to be affected areas. For this purpose all type of vehicles can be used at short notice.

Idefy source of availability	Relief Operation			
	Prepared ness	Pre (after Warning)	During	Post

During crisis :

- Requisition and keep vehicles at the disposal of the Control Room.

Role of P.H Department:

In case of water body contamination, large scale cattle deaths, epidemics, loss of flora and fauna can be expected.

➤ Analyze possibility of water body contamination due to anticipated hazard scenario and plan out remedial measures.

DURING CRISIS :

- To effect planned response measures
- To warn all concerned about the danger.

The action plan of all individual departments should be compiled together, so that it is readily available to the District Crisis Group. This document should also contain as annexure:

- vi. List of hazardous installations
- vii. Inventory of hazardous chemicals handled/ stored at the hazardous installation
- viii. Copies of MSDS of chemical handled/ stored in the district.
- ix. List of contact persons with contact numbers
- x. Any other information considered as necessary for the purpose.

CHAPTER -12

RECOVERY

RECOVERY:

Recovery is defined as decisions and actions taken after a disaster with a view to “restoring or improving life and assets of the stricken community, while encouraging and facilitating necessary adjustments to reduce disaster risk. Recovery and reconstruction (R&R) or comprehensive rehabilitation is the last step in cycle of disaster management. In addition, this is the phase of new cycle, where the opportunity to reconstruction and rehabilitation should be utilised for building a better and more safe and resilient society. Strategies for restoring physical infrastructure and lifeline services may be:

Build Back Better: This ensures greater resilience, preparedness; and minimum loss in an event of future disaster.

Participatory Planning:

Infrastructure improvement measures need to be balanced with, or at least be in line with, the social and cultural needs and preferences of beneficiaries

COORDINATION:

A plan of recovery will help better coordination between various development agencies.

Damage Assessment and Needs Assessment shall be the basis of recovery planning

Various Sectors for recovery process may be

- Essential Services- Power, Water, Communication, Transport, Sanitation, Health
- Infrastructural: Housing, Public Building and Roads
- Livelihood: Employment, Agriculture, Cottage Industry, Shops and Establishments

Basic services such as power, water supply, sanitation, wastewater disposal etc. should be restored in shortest possible time. Alternate arrangement of water supply, temporary.

Special arrangements for provision of essential services should be ensured. It can include creating temporary infrastructure for storage and distribution of water supply, running tankers, power supply and sanitation facilities

Recovery Measures

- **Damage Loss Assessment**
- **Restoration of Essential Services and Infrastructure**
- **Following tables are to be filled after an event of disaster**

Power							
Item/ Services	No. of unit damag ed	No of villages affected	Populati on affected	Recov ery measu res	Imple menti ng agen cy	Tentative Duration (Months)	Budget
Feeder							
Transformers							
HT Lines							
LT Lines							
Electric Poles							

Recovery Measures Health

PHC (village name)	CHC	Sub Centre	Drug Store	Recove ry Measur es	Implem enting agency	Tentativ e Duratio n (Months)	Budg et
No of buildings damaged							
No of health centres inaccessible							

Refrigeration and other vital equipment for storage	
Drugs and medicines perished	(Location and qty)
No of Ambulance damaged	

RECOVERY MEASURES
SOCIAL

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

Sl No	Men	Wome n	Childr en	Tota l	Recove ry Measur es	Imple menti ng agenc y	Tentativ e Duration (Months)	Budge t

Recovery Measures
Water Supply

Road and Transport

	Village / Ward	Pop u latio n	Alternat e road/ro ute	Recove ry Measur es	Imple menti ng Agen cy	Tentati ve Duratio n (Month s)	Budge t
Road Cut off							
Rail Connection							

Communication

Type	Office/Tower Damage d	Villages affected	Recover y Measure s	Impleme nting Agency	Tentative Duration (Months)	Budget
Landline connectivity			(No. of unit and location)			
Mobile connectivity						
Wireless Tower						
Radio						

Recovery Measures
Food Supply

List of village affected by disruption in food supply Type	No. of godown damaged	Type of grains perished (Ton)	Qty of grain perished (Ton)	Qty of grain at risk (Ton)	Recovery Measures	Implementing Agency	Tentative Duration (Months)	Budget
Civil Supply								
APMC								
Other								

Housing

Partial Damage	Fully Damaged / Collapsed	Recovery Measures	Prog / Scheme	Implementing Agency	Tentative Duration (Months)	Budget
Kucha	Pucca	Kucha	Pucca			

Public Utilities

Public Buildings	Partial damage (No. of units)	Fully Damaged/ Collapsed (No. of Unit)	Recovery Measures	Prog/ Scheme	Implementing Agency	Tentative Duration (Months)	Budget
Panchayat							
Educational Buildings							
Anganwadi							
Hospitals							
Office Buildings							
Market							
Police station							
Community Halls/ Function plots							

**Recovery Measures
Restoration of Livelihood**

Provisioning of Employment	No. of workers	Implementing Agency	Tentative Duration (Months)	Budget
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Occupational category				
Skilled labourers				
Unskilled and , Agricultural labourers				
Small and marginal farmers				
Construction workers				
Salt pan workers				
Fisher folk				
Weavers				
Other artisans				

Land Improvement

Land erosion / siltation (Hectare)	HHs affected	Recovery Measures	Implementing Agency	Tentative Duration (Months)	Budget

Agricultural

Crop failure (Hectare)	HHs affected	Recovery Measures	Implementing Agency	Tentative Duration (Months)	Budget

**Recovery Measures
Non farm livelihood**

Cottage Industry	Extent of damage/di ruption	Recovery Measures	Implement ing Agency	Tentative Duration (Months)	Budget
Tools and equipment (Specify no. and type)			Goods and material (Specify type and qty)		
Handloom					
Pottery					
Food Processing					
Diamond sorting etc					
Printing/ Dying					
Other					

Shops and establishment

Extent of damage/disruption	Recovery Measures	Implementing Agency	Tentative Duration (Months)	Budget
Building (No. and location)	Tools and equipments (Specify no. and type)		Goods and materials (Specify type and qty)	

**RECOVERY MEASURES
LONG TERM RECOVERY PROGRAMME**

Disaster recovery typically occurs in phases, with initial efforts dedicated to helping those affected meet immediate needs for housing, food and water. As homes and businesses are repaired, people return to work and communities continue with cleanup and rebuilding efforts. Many government agencies, voluntary organizations, and the private sector cooperate to provide assistance and support. Some individuals, families and communities that are especially hard hit by a disaster may need more time and specialized assistance to recover, and a more formalized structure to support them. Specialized assistance may be needed to address unique needs that are not satisfied by routine disaster assistance programs. It may also be required for very complex restoration or rebuilding challenges. Community recovery addresses these ongoing needs by taking a holistic, long-term view of critical recovery needs, and coordinating the mobilization of resources at the, and community levels.

Oftentimes, committees, task forces or other means of collaboration are formed with the goals of developing specific plans for Community recovery, identifying and addressing unmet or specialized needs of individuals and families, locating funding sources, and providing coordination of the many sources of help that may be available to assist. Some collaborations focus on the community level and rely on the expertise of community planning and economic development professionals. Other collaborations focus on individual and family recovery and are coordinated by social service and volunteer groups. All such efforts hope to lay the groundwork for wise decisions about the appropriate use of resources and rebuilding efforts.

RECOVERY MEASURES

Under the National Response Framework, Emergency Support Function (ESF) under 14 Community Recovery coordinates the resources of federal departments and agencies to support the long-term recovery of States and communities, and to reduce or eliminate risk from future incidents. While consideration of long-term recovery is imbedded in the routine administration of the disaster assistance and mitigation programs. some incidents, due to the severity of the impacts and the complexity of the recovery, will require considerable interagency coordination and technical support.

ESF under 14 efforts are driven by State/local priorities, focusing on permanent restoration of infrastructure, housing, and the local economy. When activated, ESF under 14 provides the coordination mechanisms for the Federal government to:

- Assess the social and economic consequences in the impacted area and coordinate Federal efforts to address Community recovery issues resulting from an Incident of National Significance;
- Advise on the Community recovery implications of response activities, the transition from response to recovery in field operations, and facilitate recovery decision-making across ESFs;
- Work with State, local, and tribal governments; NGOs; and private-sector organizations to conduct comprehensive market disruption and loss analysis and develop a forward looking market-based comprehensive long-term recovery plan for the affected community;

- Identify appropriate Federal programs and agencies to support implementation of the Community recovery plan, ensure coordination, and identify gaps in resources available;
- Avoid duplication of assistance, coordinate to the extent possible program application processes and planning requirements to streamline assistance, and identify and coordinate resolution of policy and program issues; and
- Determine/identify responsibilities for recovery activities, and provide a vehicle to maintain continuity in program delivery among Federal departments and agencies, and with State, local, and tribal governments and other involved parties, to ensure follow-through of recovery and hazard mitigation efforts.

GRIEVANCES REDRESSAL SYSTEM

Grievance redressal is important aspect in the context of providing need based assistance to affected communities with transparency and accountability. It is also ensures the protection of their rights and entitlements for disaster response services.

Grievance Redressal System No.	Key Person/ Establishment	Contact No	Address
1	DEOC/ RAC		Collector Office-District Emergency Operation centre
2	DDO		District Panchayat
3	Police		S.P.Office,Angul

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

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

CHAPTER -13

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 and 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 from NDRF.
- This is, however, subject to the adjustment of 75% of the balance available in the State's SDRF for the instant Calamity.

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 13th Finance Commission, the Government of Odisha has constituted the State Disaster Response Fund (SDRF) replacing the Calamity Relief Fund (CRF). The amount of corpus of the SDRF determined by the 13th Finance Commission for each year the Finance Commission period 2010-15 has been approved by the Central Government. The Central Government contributes 75% of the said fund. The balance 25% matching share of contribution is given by the State Government. The share of the Central Government in SDRF is released to the State in 2 installments in June and December respectively in each financial year. Likewise, the State Government transfers its contribution of 25% to the SDRF in two installments in June and December of the same year.

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

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

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)

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.

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.

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.

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.

Financial Arrangement Funds available at the National and State Level 1. The Ministry of Finance has allocated funds for strengthening Disaster Management Institutions, capacity building and response mechanisms, as per the recommendation of 13th Finance Commission. 2. Prime Minister's Relief Fund: At the National level, Prime Minister's Relief Fund was created shortly after Independence with public contribution to provide immediate relief to people in distress for: a. Immediate financial assistance to victims and next of kin. b. Assist search and rescue. c. Provide Health care to the victims. d. Provide Shelter, food, drinking water and sanitation. e. Temporary restoration of roads, bridges, communication facility and transportation. f. Immediate restoration of education and health facilities. 3. Chief Minister Relief Fund: At the state level, provisions have been made to provide immediate support to the distressed people affected by natural calamities and road, air and railways accidents under the Chief Minister's Relief Fund. 4. Calamity Relief Fund To provide for relief for famine, drought, floods and other natural calamities, funds are provided in the state budget under the head Relief on account of Natural Calamities". Besides establishment charges, funds are provided for the grant of gratuitous relief in the shape of concessional supply of food, cash payment to indigent persons, cash doles to disabled supply of seed, fodder, medicines, prevention of epidemics, provision for drinking water, transport facilities for goods and test relief works. Funds are also provided to meet unforeseen expenditure in connection with the natural calamities and other allied purposes.

Finance and Budgeting Budget planning is a comprehensive exercise for annual financial planning. For Disaster Management, there can be two categories of budget heads— a) Line Department's own fund through various schemes and programmes; b) Additional budget required particularly for DM activities. The following are the sources available (or to be tapped) for different components of disaster management:

Table :
Different State and Central Government Schemes and Programms

Sl No.	Name of the Scheme	Sector	Nodal Department	Objective of the Scheme
1	National Agriculture Insurance Scheme (NAIS)/ Rastriya Krishi Bima Yojna (RKBY)	Crop Insurance	Agriculture Insurance Company of India (AICI)	<ul style="list-style-type: none"> To protect the farmers against the losses suffered by them due to crop failures on account of natural calamities, such as droughts, floods, hailstorm, storms, animal depredation, etc.
2	Biju Krushak Kalyan Yojana or BKK Y	Health Insurance	Agriculture	<ul style="list-style-type: none"> A health insurance scheme for the farmers in the state of Odisha
3	Pradhan Mantri Krishi Sinchai Yojana PMKSY:-	Irrigation devt	Agriculture	<ul style="list-style-type: none"> To enhance irrigation devt for agriculture purpose
4	ICDS with different kinds of services	Nutrition health& education	W & CD deptt	<ul style="list-style-type: none"> Enhancing Health & nutritional status of children (0-6 yrs) pregnant & lactating mothers
5	Kishori Shakti Yojana (KSY)	Care and protection of Adolescent Girls	W & CD deptt	<ul style="list-style-type: none"> To self-empower the adolescent girls and to improve their nutritional and health status and promoting among them awareness about health, hygiene, nutrition and family life.

Sl No.	Name of the Scheme	Sector	Nodal Department	Objective of the Scheme
6	Mission Shakti	Women Empowerment	W & CD deptt	<ul style="list-style-type: none"> Helping women to achieve economic independence by enabling them to have independent employment and income so that the women are well placed to overcome the negative social pressures and gender biases.
7	Mukhyamantri Mahila Sasaktikaran Yojana	Women Empowerment	W&CD	<ul style="list-style-type: none"> Aims at Empowerment of Women & Gender Equality. <p>Allocation in Budget 2017-18 is Rs. 90/- Crore.</p>
8	Banishree Yojana	Scholarship	Women & Child Development	<ul style="list-style-type: none"> Aims at providing scholarships to children with special needs studying in schools from primary to University level including those pursuing technical and vocational education
9	Madhu Babu Pension Yojana	Pension	Deptt of social security	<ul style="list-style-type: none"> Pension Scheme for Old, Widow and Disables
10	National Old Age Pension (NOAP)	Pension Social security	Deptt of social security	To provides social benefit to the poor household in the case of old age i.e. 65 years.
11	Orissa Disability Pension Scheme	Pension to Disabled persons	Deptt of social security	<ul style="list-style-type: none"> To Support sustenance of physically handicapped persons
12	Pre & Post Matric scholarship scheme	Scholarship	ST & SC Dev deptt	<ul style="list-style-type: none"> Aims to provide scholarship to ST SC & OBC students reading in schools & colleges
13	National Rural Drinking Water Programme (NRDWP)	Drinking water	RWSS Drinking Water and Sanitation	<ul style="list-style-type: none"> To ensure provision of Safe and adequate drinking water supply through hand pumps, piped water supply schemes etc. to all rural areas and household.

Sl No.	Name of the Scheme	Sector	Nodal Department	Objective of the Scheme
14	Swachh Bharat Abhiyan	Sanitation	RWSS Drinking Water and Sanitation	<ul style="list-style-type: none"> To accelerate the progress of sanitation in rural areas
15	BASUDHA	Water Supply	Water Resources	<ul style="list-style-type: none"> BASUDHA - Buxy Jagabandhu Assured Water Supply to Habitations. <p>Allocation in Budget 2017-18 is Rs. 1065/- Crore.</p>
16	MGNREGS	Employment	Panchayatraj	<ul style="list-style-type: none"> Providing 100 days minimum employment days to the labours
17	Pradhan Mantri Aawas Yojana	Housing	Ministry of rural devt	<ul style="list-style-type: none"> To provide assistance for construction of dwelling units and up gradation of existing unserviceable kutcha houses for Scheduled Castes/Scheduled Tribes and non-SC/ST rural families living below the poverty line.
18	Pradhan Mantri Gram Sadak Yojana (PMGSY)	Road Connectivity	Ministry of rural devt	<ul style="list-style-type: none"> The programme envisages connecting all habitations with a population of 500 persons and above in the plain areas and 250 persons and above in hill States, the tribal and the desert areas.
19	National Rural Livelihoods Mission (NRLM)	Livelihood	panchayatraj	<ul style="list-style-type: none"> Increasing livelihood of rural poor
20	Mukhyamantri Swasthya Seva Mission	Health	Health & Family Welfare	<ul style="list-style-type: none"> Aims at complementing health services in the state. <p>Allocation in Budget 2017-18 is Rs. 354/- Crore.</p>
21	Rashtriya Swasthya Bima Yojana (RSBY)	Health insurance	Department of Health and Family Welfare	<ul style="list-style-type: none"> A health insurance scheme

Sl No.	Name of the Scheme	Sector	Nodal Department	Objective of the Scheme
22	UNNATI	Urban Infrastructure	Urban Development	<p>UNNATI - Urban Transformation Initiative.</p> <ul style="list-style-type: none"> Aims at improvement of Urban Infrastructure. <p>Allocation in Budget 2017-18 is Rs. 294/- Crore.</p>
23	Mid-Day Meal Scheme	Education & nutrition	School & mass education	<ul style="list-style-type: none"> The programme covers children up to upper primary level (from class I to VIII) in all areas across the Country
24	Janashree Vima Yojna	Life Insurance	Life Insurance Corporation Of India	<ul style="list-style-type: none"> The objective of the scheme is to provide life insurance protection to the rural and urban poor persons below poverty line and marginally above the poverty line.
25	Ahar Yojana	Food Subsidization	Odisha Mining corporation	<ul style="list-style-type: none"> Provides cheap lunch to urban poor at a subsidized price of Rs 5/- per meal. The mission of this scheme is to provide cheap lunch to laborers who travel to big cities in search of work
26	ABADHA	Heritage & Architecture	Culture & Tourism	<p>ABADHA - Augmentation of Basic Amenities & Development of Heritage & Architecture.</p> <ul style="list-style-type: none"> Aims at developing Puri into a World Class Heritage Site. Allocation in Budget 2017-18 is Rs. 100/- Crore.
27	SWARNA	Sports Development	Youth Affairs & Sports	<ul style="list-style-type: none"> SWARNA - Sports With Aim For International Acclaim. <p>Allocation in Budget 2017-18 is Rs. 94/- Crore.</p>
28	Mahila & Shishu Desk	Women & Child Desk	Police deptt	<ul style="list-style-type: none"> To attend to the grievances relating to

Sl No.	Name of the Scheme	Sector	Nodal Department	Objective of the Scheme
		in all Police Stations		Women & Children the two vulnerable sections.
29	Atal Pension Yojna	Pension	Bank	<ul style="list-style-type: none"> To provide pension to APY beneficiaries after age 60
30	PMJSY	Insurance	Bank	An accidental death and full disability covers of Rs. 2lakh and for partial disability cover of Rs. 1 lakh
31	PMJSY	Insurance	Bank	Rs 2 lakh in case of death for any reason
32	National Horticulture Mission (N.H.M.)	Plantations	Horticulture	<ul style="list-style-type: none"> 75% subsidy is given to the farmers on Fruit tree plantations and other programmers
33	National Mission on Medicinal Plants N.M.M.P.)	Plantations	Horticulture	<ul style="list-style-type: none"> Subsidy is given to farmers under this scheme for Aonla, Aswagandha, Ghrit Kumari, Sarpagandha, Bael, Tulshi, Stevia, Pippali etc
34	National Mission on Micro-irrigation	Irrigation	Minor irrigation	<ul style="list-style-type: none"> Subsidy is given to farmers under this scheme for installation of Drip Irrigation System and Sprinkler Irrigation System.
35	Public Distribution System	Food security	Civil supplies	<ul style="list-style-type: none"> Distribution of Rice / wheat at very low price per kg to the beneficiaries
36	Sukanya samrudhi yojana	savings	Bank & post offices	Obtaining matured amount after age of 18

At the Block level, the budgeting for various activities should be planned and incorporated in TDMP, aligning with respective activities of line departments and other agencies. The activities that are proposed in various sections of this plan (mitigation, capacity building, recovery, etc.) needs to be budgeted and reflected in the following format. The Budget source columns indicates tentative source of funding (it may be line department funds or additional funds from above mentioned sources)

PROCEDURE AND METHODOLOGY FOR MONITORING, EVALUATION,

UPDATION AND MAINTENANCE OF DDMP

Evaluating the effectiveness of plan & maintenance involves a combination of training events, exercises etc. to determine whether the goals, objectives, decisions, actions and timing outlined in the plan will result in an effective response. Guidelines for monitoring and evaluation of the plan are as given below:

- Regularly review the implementation of the plan.
- Check the efficacy of the plan after any major disaster/emergency in the district and see what did work and what did not work and make amendments to the plan accordingly.
- Keep India Disaster Resource Inventory (IDRN) updated and connected with the plan.
- Update coordinates of responsible personnel and their roles/responsibility every six months or whenever a change happens. Names and contact details of the officers/officials who are the nodal officers or the in-charge of resources to be updated on regular basis.
- Plan should be web enabled with access on intra and internet.
- Plan should be circulated to all stakeholder departments, agencies and organizations so that they know their role and responsibilities and also prepare their own plans.
- Regular Drills/exercises should be conducted to test the efficacy of the plan and check the level of preparedness of various departments and other stakeholders.
- Regular training and orientation of the officers/officials responsible to implement the plan should be done so that it becomes useful document to the district administration.
- Army, NDRF, SDRF and other agencies should be integrated into the plan exercise regularly.
- DDMA should hold regular interaction and meetings with the Army or any other central government agencies for strengthening coordination during disasters.
- The DEOC should be made responsible for keeping the plan in updated form and collecting, collating and processing the information.

10.1 Authority for maintaining and reviewing the DDMP

The DDMA is the authority for maintaining and reviewing the DDMP. As per Sub Section (4) of Section 31 of the Disaster Management Act, 2005, the plan would be reviewed and updated annually. The plan will then be uploaded in the District Website.

10.2 Monitoring & Evaluation- Mock Drill

The DDMP has to be properly monitored and evaluated. This can be done by conducting Table Mock Exercise/Mock Drill and Mock Exercise at District, ULB, Block and village levels. These exercises can be conducted twice a year preferably in the month of May and October. All stakeholders of DM like the Government, NGOs, corporate and community are to be participated for the success implementation of the plan.

10.3 Monitoring and gap evaluation

After the simulation exercises, the DDMA will encourage interactions with all the stakeholders to evaluate the gaps, lessons learnt with proper documentation for further improving the capability to deal with future disasters.

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

RESPONSIBILITIES OF THE STATE DEPARTMENTS AND AGENCIES –

All State Government Departments, Boards, Corporations, PRIs and ULBS will prepare their DM plans including the financial projections to support these plans. The necessary financial allocations will be made as part of their annual budgetary allocations, and ongoing programmes. They will also identify mitigation projects and project them for funding in consultation with the SDMA/DDMA to the appropriate funding agency. The guidelines issued by the NDMA vis a vis various disasters may be consulted while preparing mitigation projects.

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District Disaster Response Funds and District Disaster Mitigation Funds are proposed to be created at the District Level as mandated by Section 48 of the DM Act. The disaster response funds at the district level would be used by the DDMA towards meeting expenses for emergency response, relief, rehabilitation in accordance with the guidelines and norms laid down by the Government of India and the State Government. All State Government Departments, Boards, Corporations, PRIs and ULBs would prepare their DM plans, including the financial projections to support these plans. The necessary financial requirements would be made a part of their annual budgetary allocations and ongoing programmes and used for mitigation and preparedness measures. They will also identify mitigation projects and project them for funding in consultation with the SDMA/DDMAs to the appropriate funding agency. The guidelines issued by the NDMA vis-a-vis various disasters should be considered while preparing mitigation projects. Other financing options for restoration of infrastructure / livelihoods. Like utilization of flexi fund within Central Sponsored Scheme for mitigation/restoration activities in the event of natural calamities in accordance with the broad objective of the Central Sector Scheme. DDMA should also look at other options of new financial tools like catastrophe risk financing, risk insurance, micro-insurance etc. to compensate for massive losses on account of disasters. Opportunities of CSR investments should also be explored and elaborated under this section by the DDMA for increasing district resilience.

13.8 Fund provision for disaster preparedness & capacity building

1. State Disaster Response Fund (SDRF)

As per Section 48 (1A) of the DM Act, 2005, SDRF is to be created with 90% Central share and 10% State share. This fund is to be made available to the SEC for post-disaster activities.

2. District Disaster Response Fund (DDRF)

As per Section 48 (1B) of the DM Act, 2005, DDRF is to be created for pre-disaster activities and to be made available to the DDMA. However, this fund is yet to be created and the fund is related from SDRF by the Revenue & Disaster Management Department as of now.

3. District Disaster Mitigation Fund (DDMF)

As per Section 48 (1D) of the DM Act, 2005, DDMF is to be created for post-disaster activities and to be made available to the DDMA.

4. Department Fund

As per Section 48 (C) of the DM Act, 2005, each department of the state Govt. Shall allocate funds for measures for prevention of disaster, mitigation, capacity building and preparedness.

5. Recommendation of the 13th Finance commission

The 13th Finance commission (2010-2015) recommended fund for Capacity Building for Disaster Response at the District, Block and Village levels. This recommendation helps to capacitate all stakeholders in DM and also for preparation and updation of DM Plans.

All State Govt. Departments, Boards, Corporations and ULBs would prepare their DM Plans including the financial projection to support these plans. The necessary financial allocations would be made as part of their annual budgetary allocations and ongoing programmes and should be used for mitigation and preparedness measures. They will also identify mitigation projects and project them for funding in consultation with the SDMA/DDMA to the appropriate funding agency. The Department should also keep in mind for mainstreaming or integration of DM into their development plans and projects. The guideline issued by the NDMA vis-à-vis various disaster be considered while preparing mitigation projects.

6. Disaster Risk Insurance

DDMA should look at other options of new financial tools like catastrophe risk financing, risk insurance, micro-insurance etc, to compensate for massive losses on account of disasters.



CHAPTER 14

LESSON LEARNT AND DOCUMENTATION

Coming from the Past Experiences The experiences drawn from the above disasters revealed the fact that the preparedness level at the district and local levels to respond to the disaster events is not adequate. The repeated occurrence of floods, drought and other disasters in Angul could not be prevented despite the previous experiences. The issues of relief and rehabilitation in the flood affected areas have remained unresolved and unsatisfactory as expressed by the affected people. The tragedy and the lessons learnt from the drought and floods changed the mindset of the government and the focus of disaster management shifted from Rescue, Relief and Restoration to Planning, Preparedness and Prevention. In essence, the decades activities sought to shift the emphasis from post-disaster relief to pre-disaster risk reduction. Activities such as evacuation, search and rescue, temporary shelter, food, drinking water, clothing, health and sanitation, communication, accessibility and public information are important components of disaster management, which would follow on the activation of Trigger mechanism.

These activities are common to all types of disasters and will require the preparation of sub-action plans by each specified authority. Angul district had faced the Phailin on 2013. It was first history in the district that Cyclone had affected severely than 1999 cyclone. It caused extensive devastation in the districts, wherein large number of trees was uprooted, roads and buildings were damaged, and power and telecommunication infrastructure was disrupted.

Lesson Learnt: Control of Gas tanker Leakge on NH -55

On 7th November 2018 there was panic situation in the city due to the incident gas loaded tanker leak. On both sides of NH-55 vehicles were stranded for couple of hours. After receiving message from ADM, I along with DDF&B rushed to the spot and advise police and District administration to spread the message with help of PA system in the locality not to use any type of fire and ignite combustible materials as LPG will catch fire immediately. In mean time Jspl team was advised to reach the spot along with fire tender and safety kits. Then we contacted IOCL team at Paradeep and Jharsuguda to provide technical support and send expert team to reach the spot. Capacity of tanker was 20 metric tonne. There are two number of Safety Relieve Valve fitted in this tank out of which one was passing. As per telephonic discussion and guidance of IOCL officials at Jharsuguda, the Driver of tanker placed a wooden attachment to block the leakage of LPG from the SRV. The leakage of gas from SRV was stopped at about 4.30p.m. Then the tanker was moved to a location with no habitation and less public intervation area near Maratira at about 5p.m. Traffic movement thereafter was normalised on NH. NDRF team from mundali came to spot at about 10.00p.m. The iocl team from Jharsuguda reached the spot around 11p.m. During inspection it was observed that one safety Relieve Valve is damaged and another safety Relieve Valve is

working satisfactory. Driver of LPG tanker had stopped leakage in SRV by inserting a wooden choke . IOCI team gave clearance to move the tanker to nearest LPG station at about 11.30p.m..After taking clearance from local police the tanker was released and moved around 2p.m for jharsuguda LPG station for unloading the LPG and further investigation and inspection by IOCL authorities.

leaked LPG tanker from Angul arrived at IOCL Bottling plant , Jharsuguda at about 8 AM in the morning today .There was almost zero leakage of LPG from the SRV at that time. The initial pressure noted was 56 psi. For carrying out the unloading operation ,the entry of all the other tankers were blocked to the plant as it might be risky with other tankers nearby. High pressure decanting might have caused leakage once again causing danger for the workers inside the factory.Hence it was done with utmost precaution and with controlled pressure. AD F& B, Jharsuguda discussed with the plant head and reviewed the precautions to be taken during emptying the leaked container. The unloading arms were connected and sprinklers were remote operated from control room .Moreover some extra fire fighters were deployed at the site continuously till the end of the process. The unloading started at about 9 AM. Initially the liquid was unloaded at gravitational pressure. After that vapour compressor was used to completely empty it. Pressure reached at about 5 psi. To attain 0 psi pressure, cold flaring done in a controlled manner and whole bottling operation was stopped. It was completely emptied at about 2.30 PM and 0 psi was achieved. It was checked whether there is any further leakage from the SRV. There was none. Finally it was cooled with water monitors and the operation was complete. At the end there was no measurable quantity of LPG left in the tanker. It was a beautiful coordinated effort to control the situation and no harm happened to any person or property , Good experience in tackling the industrial hazards

District Disaster Management Authority (DDMA)

The districts have shown interest and stressed upon the development of local expertise for facilitating quick response. They suggested that it would be important to empower the local fire services to shoulder the responsibilities of SDRF/DDRF with suitable equipment supports & training. It may be noted that Odisha Fire Services and odisha police service rendered active assistance to save the district from Phhailin as a response management.

Good practices

- i) DDMA's have prepared the DDMP for the district on regular basis
- ii) Preparatory meeting is organized by DM/DC as chairperson of DDMA, twice in a year during the pre cyclonic season.

Gaps

- i) Strengthening of DDMA's is required in terms of dedicated human resources.
- ii) Majority of the DDMPs are focused on response and relief mechanism. Adequate emphasis needs to be given to mitigation measures as well.
- iii) Regular mock drills are not conducted to test the efficacy of the DDMP.

RECOMMENDATIONS

- i) DDMA should prepare the district disaster management plan which should include prevention, mitigation & preparedness elements as well as relief and response management for cyclone.
- ii) It must be ensured that the areas in the district vulnerable to cyclone are identified and measures for prevention of cyclone and mitigation of its effects are undertaken by the departments of the Government at the district level as well as by the local authorities.
- iii) Directions should be given to different authorities at the district level and local authorities to take effective measures for the prevention or mitigation of cyclones as may be necessary.
- iv) The implementation of disaster management plans prepared by the key Departments of the Government should be monitored at the district level.
- v) The capabilities for responding to any cyclone in the district should be periodically reviewed and directions should be given to relevant departments/authorities at district level for their up-gradation as may be necessary.
- vi) The preparedness measures should be periodically reviewed and directions should be given to the concerned departments/ concerned authorities at district level to strengthen preparedness measures upto the levels required; for responding effectively to cyclone.
- vii) Organize and coordinate specialized training programmes for different levels of officers, employees and voluntary rescue workers in the district for effective response to cyclone.
- viii) Facilitate community training and awareness programmes for mitigation with the support of local authorities, governmental and non-governmental organizations.

- ix) It should be ensured that Government Departments at the district level and the local authorities prepare their cyclone response plans in accordance with the District Disaster Management Plan.
- x) Quarterly up-dation of telephone directory and resource inventory should be ensured.
- xi) Conducting mock drills to test the plan and updating the plan
Updation of the District Disaster Management Plan (DDMP): The team tried to impress upon the District Administration to have a reference manual reflecting essentials on disaster risk management in the pre, during, and post disaster phases, in the DDMP and accordingly structure the same.
- xiii) Thus DDMP shall cover the following details of 'Response Plan'.
 - Planning for Preparedness
 - Resources/ material identification and sourcing for the same
 - Inventory of personnel for response management
 - Advance training (including mock drills) for stakeholders
 - Inter-agency coordination Cells
 - Procurement cells (identified for relief material)
 - Distribution cells in vulnerable areas
 - HVRC (Hazard, Vulnerability, Risk and Capability Analysis) for every city (for every city and town in coast)
 - Evacuation routes
 - Shelters and nearby facilities
 - Mapping of Critical facilities



Capacity development
Mock Exercises



Students involvement in
Mock Exercises



School childrens
awareness programs





District Level Disaster Preparedness Consultation meeting

Media Coverage Reports on Disaster preparedness



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